

APPENDICES

APPENDIX I

THE CERAMIC DESCRIPTION

The Sample

The ceramic sample comprises a total of 56,438 potsherds collected from the surface in 1966, 1968, and 1978, and from excavations in 1966 and 1968. The original survey team took surface collections from nearly all the 350 sites they found. 103 of these sites fall within my study area and all of them, with the exception of three: 100, 77, and 124, yielded some potsherds and/or other artefacts, the collections ranging from 8 to 478 sherds¹. The reasons for this disparity will be suggested later. All these collections, together with sherds from the team's small test pit at Pachacamac, are now stored in the Department of Anthropology at Temple University, Philadelphia.

During the next two years preliminary hypotheses were formulated with regard to the dating of the sites, and in 1968 I made further surface collections from the sites considered to be LIP and LH. Timothy Earle also made further collections from EIP sites. Some of his data have been used by me. Our object at that time was to obtain as much variety as possible in vessel form and decoration. The 1968 sample was further enlarged by the sherds from excavations at Panquilma and Avillay, which have helped me to work out the associations of plainware and Cuzco-style pottery². In 1978

a few small collections were made at sites whose dating was uncertain. In addition, a method of collecting that would give reasonably representative sherd samples was devised. For convenience, these samples have been termed "random" in order to distinguish them from the "grab" samples made previously. This method of sampling was used at a few sites at the two extremes of the study area: 28 at the west end, and 164, 109, 136 and 135 at the east end. Its purpose was to discover whether there were differences in the proportions of Orange Ware and Brown Ware at different sites. The method and its results will be discussed later. All my 1968 and most of the 1978 collections are stored in the Casa de la Guardianía de las Ruinas de Pachacamac in Puente de Lurín, Peru. A few of the 1978 collections are stored at site 57. Further comparative material was found in the sample of plain and decorated fragments available for study from Strong and Corbett's excavations near the Temple of the Sun at Pachacamac (Strong and Corbett 1943). These sherds are now stored at the American Museum of Natural History, New York City.

In addition to sherds I have also studied whole vessels, chiefly from Pachacamac. These have been helpful in distinguishing LIP plain and decorated vessels from LH ones, and in shedding light on the shapes and the placement of decoration - something only partially revealed by the sherds. Firstly, there is a collection of 236 whole vessels excavated from Pachacamac graves by Adolph Bandelier in 1892. These are stored at the American Museum of Natural History.

Secondly, there is Max Uhle's collection from his Pachacamac excavations, now stored at the Museum of the University of Pennsylvania in Philadelphia. Very few of these vessels, especially the plain ones, were published in his report of 1903. Further remarks on Bandelier's and Uhle's excavations will be found in Appendix II. Finally, there are a few vessels on exhibition at the Museo Nacional de Antropología in Lima and at the Museo de Sitio in Puruchuco, which can be related to ones from the Lurín valley. These have been used where necessary.

Table 36 gives sherd totals according to the year and method of collection. Charts I - III should be consulted for the complete breakdown of sherds according to site, year of collection, ware, vessel form and excavation layer.

TABLE 36Sherd Totals

Year	Method	
	Surface Collection	Excavation
1941	-	4945* - Pachacamac
1966	3448	2093 - Pachacamac
1968	3302	18208 - Panquilma 21290 - Avillay
1978	379 (selected) 2773 (random)	
	<hr/> 9902	<hr/> 46536

Total number of sherds studied: 56438

* This figure represents the number available for study from the 99 blocks that contained late material, not the total number from their excavation. It includes a sample of the decorated sherds from each block, together with some plainware.

All the surface collections, except the "random" samples, were made according to the same principle, that is the potential of the sherds for a similarity seriation by features and themes, (see Rowe 1961). The rationale of this method has best been expressed by Lanning (1963 pp.149-151). So called "diagnostic" fragments are selected, these being rims, bases, handles, other appendages and decorated sherds. They are gathered in an unsystematic fashion, the amount depending on the whim of the collector, although if the site is small, then everything that appears diagnostic is taken and only the plain body sherds left behind. The inferred shapes and associated decoration are then arranged in a sequential order according to their similarity to one another and the presence or absence of certain features, the assumption being that those vessels similar to one another will be closer in age than those less similar. Such a sequence is usually dated by relating it to known ceramic sequences elsewhere. The length of occupation of each site is then inferred from the phases in the sequence that are manifest from the sherds. Such studies have been carried out by Lanning 1961, Proulx 1968 and Browman 1970. Questions, however, may be justifiably raised as to whether such sampling methods yield a representative enough collection for analysis. The reasons are as follows:-

1. They are usually biased against plainware forms, which may be collected in so small a number that their range of variation is unknown. It thus becomes more difficult to date a site that has only plainware. Moreover, because the plainware is under-represented,

inferences about the nature and function of the site may be inaccurate. For example, in at least two instances of his 1966 study Patterson selected about 200 sherds from the several thousand available for collection in the field, rejecting the rest presumably because they were plainware (Patterson 1966 pp. 12 and 16).

2. Such methods of sampling assume that variation is due to chronological differences rather than distance from other sites, site function, or cultural differences between inhabitants of each site. This can lead to a situation where each phase is represented by only one site, whose sherds vary in few ways from those of a neighbouring site. Patterson's 1966 work is an example of this, since each of his phases is built up from one site only.
3. The method assumes that the amount of variation in the collection will enable the analyst to distinguish between long and short occupation sites. Yet, owing to environmental and depositional factors, certain occupations may not be represented on the surface, leading to inaccurate inferences about the occupation span. For example, Pachacamac has a substantial EIP occupation discovered through excavation, but to the best of my knowledge there are no EIP sherds on the surface.

4. The sherds are collected in an unsystematic fashion and cannot be used for inter-site statistical comparisons. The amount obtained often merely reflects the time available for collecting. For example, in 1966 220 sherds were collected at Molle, a far smaller site than Panquilma which yielded only 134.

Notwithstanding such strictures which may well be applicable to the Lurín samples, it is my belief that the total surface collections are reasonably representative of what is on the surface of each site and, also, of what was in use at each site during its occupation span. There are three reasons: the unique environmental conditions of the central coast mid-valley zones; the general lack of decorated ware in the Lurin valley; and the results of my own survey work and excavations.

The environment of the middle zones of central coast valleys has already been discussed in Chapter Two. The features of concern here are the general lack of rainfall and strong winds, and the dearth of natural vegetation away from the river and agricultural areas, so that there is little erosion and even less natural deposition. Indeed, the landscape has remained almost static since at least conquest times. It is therefore unlikely that the material remains of any cultural period lie buried beneath recently deposited soil. It is true that the occasional huayco can deposit silt, sand and rocks of various sizes on quebrada floors, but these have never completely covered structures, as may the wind-blown sand on the coast, nor have excavations through such deposits

revealed unsuspected ceramic or architectural styles³.

One only finds what may be reasonably inferred from the nature of ceramic material close to the excavation. The same huaycos may also erode part of the house platforms and hillside structures, but I am convinced that this damage is small compared with that caused by human agents, namely the early Spanish and later armies that looted and destroyed so many sites⁴. Furthermore, an examination of those structures, mostly tombs, that were built on house platforms and are still intact, reveals no accumulation at the base of the wall, which merely rests on the platform surface without a foundation trench.

At the same time, there is no cultural superposition which would prevent sherds of earlier occupations from being represented on the surface. Excavations at three different points in the study area, Panquilma, Chontay and Avillay, in house platforms and ceremonial structures, that date from the MH to the LH, have failed to reveal superposition of living floors or any other kind of activity area that can be assigned to different time periods⁵. The same can be said of excavations in refuse heaps⁶. This suggests that the occupation extends horizontally rather than vertically. In fact, there is certainly enough land available for living and ceremonial activities above and behind the line along which irrigation ditches could be brought, so that people were not compelled to reoccupy areas through shortage of space. It is not argued that there was no reoccupation of certain areas, but that the surface distribution can give as much information as excavation on occupation span. For the above reasons, it is concluded that nothing that might cause erroneous chronological

interpretations lies buried beneath the surface.

The second reason for believing the surface collections to be representative of their sites is the small amount of decorated wares found in the study area, a phenomenon which occurs particularly in the MH and LIP. This meant that the original survey team and the members of subsequent ones were obliged to gather what was there and there was less bias towards collecting decorated sherds. It might be objected that looting, both ancient and modern, could have affected the proportions of decorated to plain wares, because attractive whole vessels and potsherds would be removed. My own view is that little has been removed by pothunters, chiefly because the greater part of the looting took place in the years directly after the conquest, when the looters' object was to find gold not pottery. This accounts for ransacked tombs and large fragments of smashed vessels around them. If this looting had been carried out recently, one would not expect to see some large fragments in the Cuzco style on the surface, as one does at Avillay, because the intact vessels would have been sought after by the pothunters. Moreover, it is unlikely that pothunters, even if attracted to sherds, could or would remove every single piece of evidence for a LIP decorated style such as the Red, Black and White Geometric, and yet leave behind the equally attractive Cuzco-style sherds. One must therefore conclude that there is a genuine lack of decorated wares for the periods in question, and that this has led to plainwares being strongly represented in the surface collections.

Finally there are my own observations on the surface distribution of ceramic material. After three field seasons, the surface of all late sites has been scrutinised thoroughly in order not to misinterpret patterns of sherd distribution. The excavations and collections of 1968 and 1978 extended the range of variation for various forms and their decoration, but no new ceramic styles were found⁷. In 1978 an intensive survey was made of between 75% and 100% of the area that had been mapped, in which the kinds of potsherds found in each structure and between structures were noted down. In addition other possible late sites were surveyed, plus the hillsides, irrigation ditches and some of the land under cultivation. The information has been sufficient to work out the succession of late forms without lacunae and to date sites and their sectors. The only difficulty has arisen in dating those sites with small collections, a point to be discussed below. Consequently, it has been concluded that the collections do represent what was in use at these sites during their occupation span.

It remains to comment on the disparity in the size of collections from different sites. The reason lies in the inconsistent definition of "site" made by the original survey team, for any small sherd scatter could be designated a site and, as such, comparable with clusters of buildings spread over many hectares, which naturally yielded larger collections⁸. There is also a functional distinction between these two extremes. The latter were sites where ceremonial activities took place and the dead were buried. They have been looted, and the grave pottery smashed and strewn over the surface.

Several pots per grave can yield hundreds of surface sherds. On the other hand those sites, or sectors of sites, which consist of no more than house platforms, are where the bulk of the population lived. These yield very little pottery, which can be inferred to have been broken in the course of domestic use, because it is usually trampled down into small fragments with worn edges, especially if it belongs to pre-LH periods. Indeed, any large sherd was probably refashioned into some other artefact. (See fig.XIX f-j and XVI f, g, i, j). About one third of the sites fall into this category of a few house platforms with some undiagnostic sherds. Since it is impossible to improve upon the surface samples, the sites will only be satisfactorily dated by radiocarbon or maybe thermoluminescence.

The Method of Analysis

My object here is to give the range of variation for each vessel form and an estimate of its date. The first step in the classification has been to group the sherds into wares, used here as a covering term for all forms manufactured from one particular paste. There are, in fact, five of these pastes: brown, which is further divided into brown and dark brown, orange, grey, buff and colonial. The wares are differentiated according to the colour of the fired paste, its texture and surface treatment. The one exception is Cuzco Polychrome which must be considered as a style not a ware, because in the Lurin valley it is manufactured from two different pastes: buff and orange. The buff only occurs in

the valley during the LH and is used only for the Cuzco Polychrome style, although the paste bears a relation to that used for Black Ware⁹. The paste of the Orange Ware is also used for the Cuzco Polychrome style, particularly at Pachacamac and sites nearer the coast. However, the surface treatment for Cuzco Polychrome is different from that given to standard Orange Ware.

The second step in the classification was to work out the various forms within each ware group. This has been possible for the Orange Ware, Black Ware and the Cuzco Polychrome style, because of the number of complete vessels. It has been less easy for the Brown Ware, since few complete vessels have been found.

Finally the decoration has been analysed by an examination of the occurrence of the various design features over the range of forms. It should be noted that, with the exception of the snake motif, these do not occur across ware groups. It must also be said that, with the exception of Cuzco Polychrome, the range of decorative features is limited to crude white designs on a matte red background with the occasional addition of black outlines or fillers. There is also a small amount of plastic decoration.

The purpose of the analysis has been to distinguish LIP ceramics from LH ones in order that this information may be used to date sites and discuss cultural change. The analysis of dates has been carried out by working backwards from the LH, that is, by examining what is commonly associated with known LH vessels and what is never associated with them. To this

end I have used the sequence at Pachacamac as a base for inferences because, through the work of Uhle, Strong and Menzel, it is the best documented for the central coast area, despite lack of radiocarbon dates¹⁰. Because of the associations of plain and fancy wares at Pachacamac, it has been possible to relate the Pachacamac plainware to the plainware found in the Lurin valley collections and thus date them. However, no attempt has been made to divide any of the accepted Peruvian time periods into phases. Until some absolute dates can be obtained, it is unlikely that any refinement can be made.

The Pachacamac Sequence

The following remarks summarise the evidence for ceramic associations at Pachacamac. This evidence is discussed in greater detail in Appendix II. Firstly, it is assumed that any plainware vessels found associated with Cuzco Polychrome or Pachacamac Black Ware may be reasonably said to date to the LH. Uhle's report on his excavations in front of the Temple of Pachacamac and the Temple of the Sun gives no indication as to plainware associations, but his excavations in the northwest part of the town revealed several forms associated with Pachacamac Black Ware. These are Orange Ware VA, VIIA, VIII and X. Strong and Corbett's excavations give further evidence of associations with Cuzco Polychrome, particularly with regard to Brown Ware I and Orange Ware IV, VA, VIIA, IX, X, XI and XVI. Patterson's excavations confirm the association of Dark Brown Ware III with Cuzco Polychrome, as well as

Orange Ware IV and IX. Bandelier's excavations, although completely undocumented, uncovered vessels that are mostly plainware but different from those associated with Cuzco Polychrome. These are Orange Ware Vb, Vc, VI and VIIb. The few decorated vessels from his excavations are clearly related to published and unpublished specimens from the Black, Red and White Geometric graves of Uhle, and may be assigned a late MH to LIP date. All these plainware forms differ from the bowls and jars associated with the EIP Lima style found in the lower blocks of Strong and Corbett's Temple of the Sun excavation. In this way, many forms in the valley can be related to the Pachacamac sequence, the chief exceptions being three forms in Dark Brown Ware: nos. I, II and IV, which have never been found at Pachacamac itself. I believe this to be due to their highland origins.

The Place of Manufacture

Some comments are in order on the place of manufacture. As will be seen later, the brown paste is similar to that used at present in the manufacture of domestic pottery by the inhabitants of Santo Domingo de los Olleros, a highland village some 25 kilometres away from the study area (see G.M. 1 and 2). Their pottery is still fired in the open air without a kiln, the vessels being stacked up against one another and wedged in place by large sherds. They are covered with the fuel, which can either be cow dung or wood from the llareta (*Azorella* sp.), and fired for a couple of hours. The resultant ashes are used

to fertilise the fields, but there remains a visible oval, approximately one to one and a half metres in diameter, with some charcoal scattered over it. This patch could be seen in the courtyards of houses that had been abandoned for some time. However, no such patches are visible in any of the Lurin valley sites, nor does one find small stone troughs for soaking the clay, as are currently used in Santo Domingo and can also be seen in abandoned houses there. Given the conditions of preservation in the study area, and that LH house platforms show less disturbance than those of other periods, one would expect to find traces of pottery manufacture at one site, even if this were the only one involved in the manufacture, in which case the amount of firing carried out would be so great that the evidence would be incontrovertible. Since this is not the case, it is concluded that the Brown Ware pottery was not manufactured at any site, but away from the habitation area, either near the river or close to the source of the clay. The latter would imply highland manufacture, since there are no pottery clays in the Lurin valley.

The same is true of the Orange Ware, for which the firing processes were different. It must have been heated to higher temperatures than the Brown, because it sometimes shows traces of vitrification¹¹. This has been noted on some vessels in the Bandelier collection, on Cuzco Polychrome sherds from Pachacamac made from the orange paste, and on various surface sherds in the valley as far as the Chuchsurco sites. The Brown Ware never shows traces of vitrification, neither does Cuzco Polychrome made from a buff paste, which is confined to

the LH. This leads one to think in terms of a coastal origin for the Orange Ware, since vitrification also occurs on Chancay style pottery¹² and South Coast pottery (Menzel 1976 p.30). In 1978 it was assumed that sites in the study area that were closer to the highlands would exhibit greater quantities of Brown Ware, whereas those closer to the coast would exhibit greater quantities of Orange Ware. To test this assumption samples were taken from sites at both ends of the study area by a specially devised method. A student walked for about 200 metres along the long axis of these sites, all of similar area and time span, and gathered every sherd within a metre on either side of his path. Sherds less than 1 cm x 1 cm were not collected. The sherds were classified into their wares and the results are shown in Table 37, where the hypothesis can be seen to be confirmed despite certain disadvantages to the method, such as the fact that the sites had been collected before, the fact that different students were involved, and that the Brown Ware crumbles into small pieces more easily than does the Orange. For the purposes of comparison with a site on the coast, I have also inserted the percentages from Patterson's Pachacamac excavation and from a block (no. 134) taken at random from Strong and Corbett's excavation. These samples from the actual coast should also be compared with the small numbers of Orange Ware sherds from excavations at Avillay, given in Chart III. Moreover, I have examined collections made from late sites between Chuchsurco and Antioquia and, although one must bear in mind that these were selected sherds, there are only a couple of Orange Ware fragments per collection.

TABLE 37

Percentages of Different Wares per Site

<u>Site</u> <u>Sherd Nos.</u>	<u>Distance</u> <u>from Coast</u>	<u>C</u>	<u>Brown</u>	<u>Orange</u>	<u>Black</u>	<u>Cuzco</u>	<u>Colonial</u>	<u>Modern</u>	<u>Total</u>
Chaimayanca 1303	41 kms		80.66	14.04	.15	4.91	.23	----	100
Nieve Nieve 639	37 kms		80.91	9.55	----	6.42	3.13	----	
San Martín 204	36 kms		85.29	12.75	----	.49	.98	.49	
Vichuya 347	36 kms		89.91	10.08	----	----	----	----	
Molle 280	25 kms	1.42	39.29	59.29	----	----	----	----	
Pachacamac Block 134 Temple of Sun 235	1 km	5.0	17.45	43.40	----	34.04	----	----	
Pachacamac Patterson 2093	1 km	4.01	28.81	63.64	.76	2.77	----	----	

Notes to Table 37

1. Brown includes Dark Brown Ware.
2. C = Charred specimens that were impossible to classify.
3. The actual number of sherds per ware in this sample is given in Chart IV.

The Method of Description

The discussion of the vessel forms for each ware group is preceded by a short description of the paste characteristics, the kind of surface treatment and type of decoration found, if any. Then follows a more detailed analysis for each vessel form. This is divided into three parts. Part A gives the actual description of the vessel and its range of variation. Part B discusses its relationships with forms from neighbouring valleys and highland zones. Part C assesses the evidence for dating the form to a particular time period. For present purposes it is the LIP and the LH that are of most concern. It is not assumed, however, that each form falls neatly into one period or another, although some, such as Cuzco forms will do so. Often a particular form, such as face neck jars, will belong in both periods. In such cases, it is possible to suggest changes in the placement of handles, lip treatment or decorative motifs, which will distinguish one period from the other. Where possible, such differences are signalled by using A, B, C, etc. after the Roman numeral that designates the form. These letters are also used to distinguish similar vessels with slightly different rims.

Part A comprises 12 items.

Item 1 is a general statement concerning the form's abundance or scarcity in the study area. As stated previously, despite sampling limitations, it is considered that these do reflect to a certain extent the reality of the distribution of surface sherds. The assessment is made on the number of rims per form,

whether or not these may be from the same vessel. A number from 1 - 30 is considered very rare; from 30 - 60 as rare; from 60 - 100 as less common; from 100 - 500 as common; and over 500 is considered very common.

Item 2 discusses the general distribution of the rim sherds in the study area; whether they are absent from any sector; and whether they are found at Pachacamac.

Item 3 classifies the rim sherds according to the kind of collection in which they occur. The total number from the surface surveys is given, together with the total number from excavations.

Item 4 describes the complete vessel, if there is one in existence, giving its measurements and particular decoration. If there is no complete vessel, the hypothesised shape is given with reasons for the hypothesis.

Item 5 describes the shape of the rim. For jars the word "rim" refers to the portion between the uppermost constriction of the vessel and the lip. For bowls the reference is to the upper portion of the vessel, that ends at the lip. The range in the orientation of the wall angle can be seen from the accompanying drawings for each form.

Item 6 describes the lip, that is, the upper edge of the vessel, for which there is usually a range of possible treatments.

Items 7a and 7b give the rim diameter and the rim height.

The former is always measured from its exterior edges and the upper and lower ends of the range are given. If there are sufficient specimens the mode is also given. The rim height is measured from the interior and along the vertical that intersects two horizontal planes, that of the lip and that of the inner juncture between rim and shoulder.

Item 8 discusses the form and placement of the handles, if known. It also gives their width, which is measured across the handle at the centre point of its span.

Item 9 describes the form of the base, if known, and also its diameter, if it is a ring or a pedestal base.

Item 10 gives the slip colours and the order in which they are painted on the vessel.

Item 11 gives the range of decorative techniques and motifs to be found on each vessel. These can be incised, impressed, appliqué, modelled, moulded or a combination of these.

Item 12 gives any other point of importance and comments on the vessel's function.

Part B comprises 8 items. All concern different neighbouring zones with which the study area pottery may be properly compared.

Item 1 concerns the upper Lurín valley beyond the study area, between Antapucro and Cruz de Laya. There are collections from several late sites here, with which the study area pottery may be usefully compared. Unfortunately no survey has yet been made

of the area between Cruz de Laya and San Damián along one tributary and between Cruz de Laya and Langa or Chorrillos along the other tributary.

Item 2 concerns the lower Lurín valley as far as the shore. Again the 1966 survey is the only source of information on ceramic material. Bonavía's 1965 study dealt chiefly with architecture and did not describe or illustrate any vessels or sherds.

Item 3 concerns the lower Rimac valley around Lima. There are several large sites occupied during the late periods and these are listed by Stumer (1954), who gives some information on ceramic material, but this is mainly through reference to the publications of others. For the area around Maranga and Huaca Pando, Jijón y Caamaño (1949) gives the most data with descriptions, drawings and photographs. Unfortunately the latter are of poor quality and the detail has to be inferred from the accompanying description, but despite this drawback, it is possible to make comparisons based on vessel shape at least. It is unfortunate that Kroeber, who worked at the same site in the same year, 1925, was only able to publish the results of his EIP excavations in 1954. He makes a brief mention of later graves but gives no ceramic description (Kroeber 1954 pp. 10-11). For the huacas to the north of Maranga at Fundo Pando a brief description and illustration of vessel shapes, which appear to be mostly plainware, have been given by Ramos de Cox and others (1975). According to the authors the shapes date from the EH onwards, but a good

third of them belong to the post-MH era. Upvalley, at the Nievería cemetery, Gayton (1927) has discussed some of the pottery from Uhle's excavations but this dates to the early MH. At Cajarmarquilla Sestieri refers to LIP burials but does not illustrate or describe the pottery he found in them, (Sestieri 1972 p.324). On the south side of the valley I myself have observed, sketched and photographed late vessels found in the vicinity of Puruchuco and on exhibit there. There are also brief notices on LIP Huancho vessels in Iriarte (1960), Villa Cordoba (1935), Stumer (1954) and the Instituto Riva Agüero (1960)¹³. Only the last two published a few photographs with their articles.

Item 4 concerns the upper Rimac around 1000 metres, which is approximately the same height as the Sisicaya sector of the study area. Unfortunately there is less published material for this zone than for any other. Milla Villena (1975) has given a brief summary of the pottery found around the confluence of the Rimac and the Santa Eulalia, but he has dealt with the right bank rather than the left.

Item 5 concerns the Chillón valley and the bay of Ancón. For the latter there is a good deal of published material, although it deals mostly with decorated vessels. It begins with Reiss and Stübel's illustration of vessels from their excavations at Ancón (1880-87). There is Strong's 1925 work on the post MH vessels found by Uhle at the Ancón cemetery, and Willey's 1943 paper on Late Ancón I burials. Bonavía's 1961 article also gives illustrations of sherds in

the Teatino style, that are mainly from Ancón. Going up the Chillón valley, Guffroy (1977) has surveyed the sites in an area equivalent to the Lurín valley study area, up to 1000 metres above sea level. The sherds that he illustrates from the late sites are mostly plainware and can be compared with sherds from Lurín valley vessels.

Item 6 refers to the dry Chilca quebrada. Engel (1966) has made a study of sites from different periods, but only one face neck jar is illustrated and the pottery description is almost non-existent. Bonavía (1959) gives a detailed description of a few hundred sherds collected from a late site on the coast at Puerto Viejo. These sherds are both drawn and photographed and comparable with those from the Lurín.

Item 7 refers to the Huarochirí area. This was surveyed in 1968 by two graduate students, John Thatcher and Nicholas Hellmuth. I have examined their collections, now stored at Puente de Lurín, and have had access to their notes, descriptions and drawings of sherds. Some of these are reproduced in figure XCVIII.

Item 8 concerns other areas which might shed light on the relationships of the Lurín ceramic material. One of these is the central highlands for which Lavallée (1967) provides some information with accompanying illustrations of late vessels. Browman (1970) also furnishes comparable material. On the coast, beyond the areas already mentioned, Kroeber provides comparable material in his study of vessels from Uhle's excavations in the Chancay valley and at Supe (1926 and

1925 respectively). To the south Kroeber has also reported on late ceramic material from Cañete (1937) and Kroeber and Strong (1924) on late burials excavated by Uhle at Chincha. Beyond these areas relationships are tenuous.

For the Cuzco style and Black Ware items 1 - 8 are discarded as inappropriate. Instead comparisons are made with any relevant published material. It would appear that more analysis has been made of the Coastal Cuzco than the Highland Cuzco style. The publications that are most helpful are those by Menzel (1966) on, among other items, LH burials from Chincha. There are also her publications on burials from a similar period, excavated by Uhle at Ica (1976), and her general evaluation of Uhle's finds in 1977. For the highlands, Rowe's 1944 description is too bare to be of more than limited value. Pardo's 1957 work is more detailed, but there are not enough illustrations. Fernandez Baca's 1972 work is only of limited utility since it does not correlate designs with shapes. There are also illustrations in various site reports, which have been used where required.

Part C relates the grounds for assigning a LIP or a LH date to the forms and their associated decoration. There are four conditions for considering a form to belong in either period. Obviously the date is most secure when each condition can be fulfilled, but this is rarely possible, though most forms fulfil two or even three conditions. There are for each period one negative and three positive grounds for evaluating the data.

1. For the LH these are as follows:-

- a. The form is LH if it is found at Pachacamac, either in Strong and Corbett's, Patterson's, or Uhle's excavations in the northwest part of the town.
- b. The form is LH if it is found at Avillay, either in the house platform excavations (test pits 1 - 3) or in test pits 8 and 9 in the gabled structure.
- c. The form is LH if its shape or some feature of its decoration can be related to known LH material from elsewhere.
- d. The form is LH if it is consistently absent from sites that do not contain Cuzco-style pottery.

2. For the LIP there are the following:-

- a. The form is LIP if it is found in the Bandelier collections from Pachacamac, the vessels from which are dated to this period.
- b. The form is LIP if it is found at sites or sectors of sites that have no Cuzco-style pottery.
- c. The form is LIP if it is related by shape or decorative feature to known LIP vessels from elsewhere.
- d. The form is LIP if it is not found in Strong and Corbett's excavation at the Temple of the Sun, or in Patterson's excavation to the northeast of the town, or in Uhle's excavations to the northwest.

These conditions are to all intents and purposes mutually exclusive but do not allow for forms that may straddle both time periods. It is more than likely that certain forms with their associated decoration were manufactured in both time

periods and, if found in isolation, can give no dating information whatsoever. I have indicated in my discussion which are likely to fall into this category.

Finally, there is no indication that the Cuzco style arrived in the Lurín valley before the Incas. It is considered as purely LH on the coast. In the same vein the glazed ware can only be Colonial. At the time of writing there is no pure Colonial site in the valley, and some LH plainware must have continued to be manufactured in the Colonial period, i.e. after 1532. Those indigenous forms that can be associated with the glazed ware have been indicated in the discussion.

N.B. When discussing relationships "a few" = 0 - 5
"some" = 5 - 10
"many" = 20+

NOTES

1. This number, 103, includes all sites on G.M. 3 with the exception of 353 and 354, located by me in 1968, and the Chuchsurco sites of 175, 177 and 343, which are outside the study area. Collections from 175 and 177 have been used in the ceramic analysis because they provide useful information.
2. In this thesis plainware is used to mean matte, undecorated, (or at the most slightly decorated) vessels that were used for storage and cooking. Decorated or fancy ware refers to highly burnished vessels with elaborate ornamentation that were used in ceremonies and/or burials.
3. At Avillay pits 8, 9 and 10 were excavated through huayco deposit and did not yield pre-LH material.
4. For the wars and rebellions of early Colonial Peru, which would have resulted in soldiers' going up and down the Lurín, see Hemming 1970 pp. 137-235. He does not include the rebellion of Hernández Girón, whose followers had several skirmishes in the lower Lurín (Pedro Pizarro 1917 p. 179). During the wars of liberation General Canterac marched down the Lurín to Lima, via a quebrada at Antioquia (Stiglich 1922). During the War of the Pacific there were many skirmishes between the valley inhabitants and the Chileans, who reached Huarochirí from the coast (Sobrevilla 1963 pp. 122-123).
5. See Appendix II for a discussion of my own excavations. For those at site 105, Chontay, see Earle 1969 pp. 69 and 84.
6. The only exception to this is the possible earlier hearth at the bottom of pit 5 at Avillay.
7. The only exception is the finding of a few sherds in the Nievería style at site 58. There are only three, and it is unlikely that they would have been found if a different method of collecting had been used.
8. For an example of this inconsistency one should note the two quebradas of Chaimayanca and Antivales on G.M. 3. Both have structures on the floor, the hill slopes and the ridge top. The larger, Chaimayanca, has been given one site number, 164, whereas Antivales is divided into six sites: 82, 84, 86, 88, 90 and 106. Furthermore, on the north side of the valley near the San Francisco quebrada, house platforms around three adjacent water channels on the hill slope have been given three site numbers: 70, 72 and 74. A much longer stretch of slope on the south side of the valley near Vichuya has been given one site number, 109. Such inconsistency of definition makes it impossible to compare the various time periods on the basis of the number of sites per period.

9. The paste of the Black Ware has been fired to a grey colour, although the surface is black. The term Black Ware has been used because many of the forms are part of the Pachacamac Black Ware style, as defined by Menzel (Menzel 1966 and 1976).
10. The relevant publications are Uhle 1903; Strong and Corbett 1943; and Menzel 1964 and 1977. Of these authors only Strong discusses the whole Pachacamac sequence, and then only on the basis of his own excavated materials.
11. This is accidental vitrification and/or bloat from over-firing according to Bob Sonin in a personal communication.
12. Bob Sonin, personal communication.
13. Huancho is a name given to the late cultures of the central coast. A brief description of these is given in Iriarte 1960.

BROWN WARE

In spite of inadequate sherd samples for some forms, all vessels, with the exception of form IX, were manufactured by coiling, since the joints of coils are often visible on the interior of body sherds and breakage sometimes occurred along these joints. The lower half of the vessel, however, may have been modelled from a single lump of clay, much as a whole pot is made today at Santo Domingo de los Olleros¹. The strap handles (fig. XIX d) were modelled separately and then attached to the vessel. Bases were usually rounded, the few flat specimens (fig. XIX e) being earlier in time. The only exception to the coiling method is found with form IX, which was probably moulded in two horizontal halves over the base of finished vessels or a gourd. Generally pots were thickest at the juncture of neck and rim, with the walls thinning out towards the point of maximum diameter and then thickening again towards the base. Body sherds from all forms range between 0.45 and 0.85 cms thick, with rim sherds between 0.40 and 1.10 cms.

The paste is similar to one used for bowls and jars in the EIP, but in the later periods it is used almost exclusively for jars, bowls being exceedingly rare except for the odd specimen which is probably LH. Its texture is grainy and sherds are found with jagged edges because the paste crumbles easily. White quartz and other inclusions are visible in the core and sometimes on the surface, but it is not certain whether these were deliberately added or occur naturally in the clays². At any rate, microscopic analysis has shown that the particles have rounded edges, whereby

it is inferred that they were not deliberately crushed. Inclusions range in size from 0.20 mm to 2 mm with occasional larger ones.

Surface treatment is similar for all vessels manufactured from this paste. Interiors were partially scraped while leather hard and exhibit a rough, uneven surface with scoring and pitting. Sometimes finger prints can be seen, and there is usually a visible interior juncture where the rim was pressed down into the neck. The vessel exteriors were scraped and shaved with a hard instrument³ which sometimes left marks in the form of diagonal grooves. They were smoothed in horizontal strokes with another hard instrument, probably a pebble (fig. C I c). This smoothing left tracks and occasional striations all over the vessel, so that the surface is relatively uneven and matte, for the instrument did not impart much lustre. Only forms III, V and IX possess a slight burnish. The rims show the faintest of striations around the lip, which suggests that a damp cloth was used in the finishing, as it is nowadays in Olleros (Tello 1924 p.426 fig. 9d). In forms such as I and III, where the rim interior is more visible than the exterior, this latter is often very uneven and pitted, as if the finishing procedures did not matter. Some forms such as I, III and V were given a red slip before the smoothing process. This is possibly a late phenomenon since sherds that are not associated with LH occupation do not exhibit this⁴.

The firing was poorly controlled, since over half the sherds show a grey to black streak in the core and there are often grey/black patches on the surface. Form I sherds from sites occupied

only during the LH, such as 104 and 136, are usually completely oxidised, which may be due to improved techniques of pottery manufacture learned from the Incas. The grey to black streak is Munsell 5YR 4/1 to 3/1. The core colour is 2.5YR 4/2 - 4/4 - 4/6, a red to reddish-brown colour. The surface is a darker red: if slipped, 10R 5/3 - 5/4 and 4/4 - 4/6. If unslipped it tends towards a reddish-brown 2.5YR 4/4 - 5/4.

NOTES

1. The inhabitants assured me that nowadays no vessel was made there by coiling, but instead a lump of clay in a "bun" shape was placed on a "molde", which is a large ceramic plate, which in turn was placed on a grinding stone. The pot is drawn out and shaped by the hands as the "molde" is slowly revolved. Tello (1924 p.425), speaking about pottery-making in the same region, gives similar information but adds that further coils were placed on the vessel as it was built up.
2. The inhabitants of Olleros distinguish two kinds of clay a "paisha", which is fine and compact; and a "caica", which is sandy and coarse. They informed me that the best paste was made from a mixture of these from at least five different sources.
3. In Olleros they used an old iron knife-blade or a piece of bone.
4. See Thompson 1968, concerning the Inca introduction of a deeper red slip in local pottery in the Huánuco region.

A. Description

1. Very common. The most frequent form at late sites.
2. It is found in all sectors of the study area and at Pachacamac, both on the surface and in excavations.
3. Of the total sample 579 rims were collected in surface surveys, three from Patterson's excavation at Pachacamac, and 75 from Strong and Corbett's excavation there. There are 81 rims from the excavation at Panquilma and 362 from the excavations at Avillay.
4. There is a complete specimen found by Alberto Bueno in his excavations of the central complex at site 57 (fig. Ia), and other almost whole specimens from the surface, in particular from site 164. The 57 vessel stands 43 cms high with a rim diameter of 29 cms and an exterior neck diameter of 16 cms. The 164 vessel is 23 cms high with a rim diameter of 14 cms. The body of these vessels is globular to oval, with only a slightly flattened base. The rim diameter may equal the neck diameter (fig. Ig), though in most examples the rim curves outwards so that it is several centimetres wider at the lip. Handles are mostly placed on the body of the vessel, although a few extend from rim to shoulder. It is likely that the majority of unassociated Brown Ware handles found at late sites come from form I.
5. The rim, which is distinctive enough to be recognised from the tiniest fragment, curves outwards like an open

- bowl and ends in a thickened, flattened lip.
6. In some examples the lip is rounded and only slightly flattened (figs. Ic, m, IIe); in others it is thickened and flattened in an exaggerated fashion (figs. Ij, l, IIb, j). Such variations occur within sites, for example, Pachacamac has both (figs. IIc, j).
 - 7a. The rim diameter varies from 10 to 40 cms. Many examples from Pachacamac are of particularly large, thick rims.
 - 7b. The rim height varies from 2 to over 10 cms.
 8. The two strap handles from the site 57 vessel (fig. Ia) are placed vertically half way down the body, at the point of maximum diameter. This is the usual position of the handles for this form. Some rims from sites 164, 137 and 110 exhibit similar handles placed on the rim itself, extending from the lip to the shoulder (fig. Ib).
 9. There is sometimes a slight shoulder or ridge on the exterior to indicate the start of the base, which is curved.
 10. A few specimens show traces of a red slip. This is most apparent on fragments from upvalley sites of 136, 137 and 164.
 11. There is no decoration on this vessel.
 12. The lower two thirds of the vessel from site 57 show heavy charring, which suggests that the vessel was used over a fire. Yet large fragments from form I vessels from Nieve Nieve show no evidence of charring, and it is therefore concluded that it was a multi-purpose vessel, used for cooking and storage, something also

suggested by its size range.

B. Relationships

1. It is common on certain sites upvalley. At some of these sites there are Cuzco-style sherds.
2. It is also common on many downvalley sites.
3. At Fundo Pando near Lima the drawing of "tipo 21" (Ramos de Cox et al. 1974/1975 pp. 7-12, plate 2) bears some resemblance to form I, but it is not clear whether this type is a bowl or a jar rim and there is no indication of the paste.
4. There is nothing similar from the upper Rimac valley.
5. There is nothing similar in the Chillón or Ancón region.
6. There is nothing similar from Chilca.
7. There are some similar fragments from the Huarochirí region (Thatcher 1969 sites 19 and 39) but surprisingly not the abundance one might expect, given the ties between Huarochirí and the coast during the late periods, (Rostworowski 1979 pp. 109-117).
8. As yet, there is nothing similar from elsewhere, which may be a reflection of the lack of interest in plainware. Furthermore, the rapidly growing population in the Rimac valley at a similar altitude to the study area has destroyed some sites. Rostworowski states that by the early eighteenth century the Chontay/Sisicaya region belonged to the guaranga of Chaucarima, whose villages stretched up along the northern branch of the Lurín around San Damián (Rostworowski 1979 p.112 and facing map).

Since the archaeology of this area is unknown,
it is probably there that vessels related to form I
should be sought.

C. Dating

The form is dated as LH on grounds a, b, and d of section 1. It is found in association with the Cuzco style in most of the Inca blocks of Strong and Corbett's excavations near the Temple of the Sun. It is also found in Patterson's excavations on the outskirts of the site (see Appendix II and Chart II). It is found in excavations in late structures at Avillay and is rare or non-existent at sites without Cuzco pottery. It seems to be the major domestic ware of the study area during this period, particularly from Chontay upwards. Because it is domestic ware, it is, I feel, unlikely to belong only to the LH and must logically have had its roots in the LIP. It is found in ones and twos at the Chuchsurco sites and at Chontay (site 105), where there is no Cuzco-style pottery or other LH features and which can, on other grounds, be dated to the LIP.

Brown Ware - form II

Sample - 86 rims

Figure III

A. Description

1. A less common form, although its scarcity may be in part due to the fact that it is hard to assign very small fragments to this form, which is not the case with form I.

2. It is found in all sectors of the study area and at Pachacamac.
3. By far the majority of rims come from surface collections, 84 in all, whereas only two come from excavations. Of these one is from Strong and Corbett's Pachacamac excavation (fig. III i) and one from the excavation at Panquilma.
4. There are no complete specimens and a hypothetical reconstruction is given in figure III s. Differences between this and form I lie in the rim shape and lip treatment. Otherwise the contours of the vessel body follow those of form I, with vertical handles and a rounded base. Its height is unknown.
5. The rim interior is slightly concave and the exterior rounded and convex. From figure III it will be seen that the rim does not curve out in quite the bowl-like shape of form I but verges on a straight flare.
6. The lip is usually rounded (figs. III d-h, l-m, p-r, and t), occasionally thinned (figs. III a, c, h, k, and n), and in two specimens it is a little everted (figs. III i and o).
- 7a. Rim diameters vary from 12 to 28 cms.
- 7b. The rim height varies from 2.90 to 5.50 cms.
8. One sherd shows the traces of a vertically-placed handle.
9. There are very few bases in Brown Ware in the collections and none that can be associated with this form. It is likely to have been rounded.
10. There is no slip.
11. There is no decoration.
12. This form is likely to have had both cooking and storage functions.

B. Relationships

1. There are a few similar rims from upvalley.
2. There are a few similar rims from downvalley.
3. There is nothing similar from the lower Rimac.
4. There is nothing similar from the upper Rimac.
5. There is nothing similar from the Chillón/Ancón region.
6. There is nothing similar from Chilca.
7. There are some similar forms in a brown paste from Huarochirí (fig. XCVIII a and b). Thatcher (1963 p. 11) describes a similar form for some late sites, particularly site 23, so that the relationships seem to lie upvalley.
8. There is, in our present state of knowledge, nothing similar from elsewhere.

C. Dating

The form is dated as LIP but lasting into the LH. It belongs in the former period because the bulk of the rims come from sites without Cuzco-style sherds, that can be dated as LIP on stronger grounds. Such sites are 109, 177 and 31. In this connection it is interesting that Thatcher gives an LIP date for site 23. On the other hand, on ground 1a, it should just last into the LH, something confirmed by the fact that it occurs only sporadically at sites with Cuzco-style sherds.

Brown Ware - form IIISample - 452 rimsFigures IV and VA. Description

1. This is a common form found at every late site with the exception of six.
2. It is found in all sectors of the study area and in particular association with Dark Brown Ware forms I, II and IV on the surface of certain sectors of sites. It is not found at Pachacamac.
3. There are 397 sherds from surface collections, sixteen from the Panquilma excavation and 39 from the Avillay excavation.
4. At present there are no complete vessels, but a very large sherd from site 28, with a rim diameter of 15.50 cms, came from a vessel with a probable height of 12 to 13 cms (fig. IV a). Since the upper end of the range for rim diameters is 40 cms, there is probably as much height and size variation for form III as for form I. The body of the vessel was globular or oval with vertical handles. Its rim took the form of a large pronounced flare.
5. The rim meets the neck interior at an acute angle and flares sharply outwards for a span between 3.50 and 9.50 cms. The interior varies from the straight to the slightly convex in profile and the rim exterior from straight to slightly concave. There is often a slight burnish on the interior and this is most apparent around the lip.
6. The lip is usually squared off and flattened (fig. IV). Occasionally, however, it is rounded (fig. V e, f and p).

In one example from Vichuya (fig. XIX a) there are small slashes along the lip, which are perpendicular to the edge.

- 7a. The rim diameter varies from 14 to 40 cms.
- 7b. The rim height varies from 2.6 to 5.5 cms.
8. Traces of handles show that these were vertical and placed at the maximum vessel diameter. These were of the strap kind. The ones associated with the rims of this form vary between 2.05 and 2.70 cms in width.
9. The base was probably rounded.
10. There is no slip.
11. The only decoration known for this form is found in the slashes on the lip described under 6.
12. Some sherds are fired to a darker brown colour and resemble the Dark Brown Ware. Since its size range is similar to that of form I, it probably had both cooking and storage functions.

B. Relationships

1. The form occurs sporadically at upvalley sites.
2. It is also found in the downvalley sites as far as Manchay.
3. There is nothing similar in the lower Rimac valley.
4. As yet there is nothing similar from the upper Rimac valley.
5. There is nothing similar from the Chillón or from Ancón.
6. There is nothing similar from Chilca.
7. There are, however, some related forms from Huarochirí, which Thatcher describes as being made from a brown or dark brown paste (figs. XCVIII c, d, and e). The rims

are fragmentary and none shows the angle at the neck.

Moreover the lip is rounded rather than square.

8. There is nothing similar elsewhere.

C. Dating

This form is considered to belong to the LIP on grounds 2 a and b. It is noteworthy that no specimens come from Uhle's excavations and, what is more important, none comes from Strong and Corbett's excavations near the Temple of the Sun. It does occur in the Panquilma excavation and in some of the pits from Avillay, all of which are disturbed refuse. What is most revealing is that in the one obviously LH structure at Avillay, where pits 8 and 9 were excavated, there is no trace of this form. It is also prevalent at the Chuchsurco sites, 109, and 105 - all sites without Cuzco pottery. For these reasons the dating is LIP. The section on relationships suggests that the ties were upvalley rather than downvalley.

Brown Ware - form IV

Sample - 71 rims

Figures VI and
VII a - h

A. Description

1. This is a less common form, despite the fact that its rim is distinctive.
2. It is found in most sectors of the study area, and most sites have yielded a couple of rims, the exceptions among the larger sites being 169 and 28.

3. There are 68 rims from surface collections, two from the Panquilma excavations and one from the Avillay excavations. There are none from Patterson's Pachacamac excavation nor from Strong and Corbett's.
4. There are no complete vessels and the fact that no rim bears traces of a handle and that flat bases are rare in Brown Ware leads me to hypothesise the form drawn in fig. VII h. As in the case of form III, some examples are made from the dark brown paste, e.g. fig. VI i, although the majority are from the lighter one under discussion here. The form is one of a globular body with a composite rim and vertically-placed strap handles on or just above maximum diameter.
5. The rim is that of a bowl whose upper constriction is the same diameter as that of the neck of the vessel, or else slightly wider. A small flare springs from the upper constriction. The rim interior is well smoothed along the flare, whose angle at the neck interior resembles that of form III. It is less well smoothed on the interior of the bowl, which can be quite uneven.
6. The lip is usually flattened (fig. VI a-c, e-h, j-l and o). Some examples, however, show a lip thickened on the exterior and similar to that of Dark Brown Ware form II (fig. XVI), and two show a lip treatment similar to that of form I (figs. VI m and VII i).
- 7a. The rim diameters vary from 10 to 34 cms.
- 7b. The rim height varies between 3.3 and 10 cms.
8. The handles in the collections are all strap and vertically placed. They are likely to have been placed at the

maximum diameter of the vessel.

9. The bases associated with the collections in Brown Ware are all rounded and slightly flattened.
10. There is no slip.
11. There is no decoration.
12. Similar comments apply here to those given in section 12 of the previous forms.

B. Relationships

1. There is nothing similar from upvalley collections. This is strange and may be due to poor sampling.
2. There are a few examples from sites downvalley as far as Manchay. There is nothing similar from Pachacamac, although there is a similar rim form in Orange Ware (form VIII, figs. XXXI and XXXII). This is not nearly as heavy a rim as the Brown Ware one, for the flare is less exaggerated and the rim diameter is smaller.
3. In the lower Rimac valley there are similar rims from Fundo Pando (Ramos de Cox et al. op. cit. lámina 2, tipo 7), but pastes and diameters are not specified. At Maranga there is a similar rim shape (Jijón y Caamano 1949 p. 326 fig. 12) but, as at Pachacamac, it appears to be Orange Ware.
4. There is nothing similar from the upper Rimac valley.
5. In the Chillón, Guffroy has depicted similar rims (Guffroy 1977 fig. 6 e and h), but his form XI appears to be made from an orange paste and his form XIII is not assigned a paste, although it does have a large rim diameter - 36 cms. At Ancón, Strong illustrated from the Uhle collections certain vessels with a similar rim shape.

(Strong 1925 plate 44 a, d, h, m). These resemble the ones mentioned by Jijón for Maranga, but they are not plainware and the vessel shape is not the one that I have hypothesised for form IV. They are placed in Middle Ancón II.

6. There is nothing similar from Chilca.
7. There is nothing similar from Huarochirí.
8. The general rim profile is similar to that of certain rims in the Chancay Black on White style, although these are usually much smaller in diameter and made in a different paste.

C. Dating

The form is dated as LIP and as just lasting into the LH on grounds 2 a, b and c. Although it is found on the surface mingled with LH sherds, it is also found at several sites that have no Cuzco-style pottery or form I, such as 160, 166, 90, 71 and 87. The fact that there is only one specimen from the 15 excavations at Avillay and only two from the Panquilma excavation is also significant, since these excavations were dug into mainly disturbed LH material. With regard to 2 b, although it is not found in the Bandelier collections, there is a similar form with a composite rim. The rim similarities have already been noted between form IV and forms from Ancón, dated as late MH. This suggests that the Brown Ware form could date back that far. Because of its presence at 136 and 104, sites that can be dated to the LH on architectural grounds as well as ceramic, it is suggested that the form lasted into

this period. At both these sites the lip treatment resembles that of form I. (fig. VII i).

Brown Ware - form V

Sample - 39 rims

Figure VII j - q
and Figure VIII

A. Description

1. This is a rare form with a restricted distribution.
2. It is not found in the Huaycán or Piedra Liza sectors of the study area, but only from Chontay upwards.
3. There are 30 examples from surface collections and nine from excavations at Avilley. There is nothing from the Pachacamac excavations.
4. There are no complete specimens and the hypothesised vessel contour has been drawn with a rounded base (fig. VII q) because no pointed ones in Brown Ware have yet been found. The general shape of the vessel is that of an aryballus, although the neck is squatter. There are two lugs just beneath the lip and handles on the vessel body.
5. The rim rises up straight from the narrow neck and then curves outwards, with the typical swelling of the aryballus profile. Two rims, however, show a definite angle at the exterior rather than a curve (figs. VIII f and k).
6. The lip is usually flattened (fig. VII m, o, p, and fig. VIII a, c, e, h, j, m, n), though occasionally rounded (fig. VII j - l and fig. VIII b, k, and l).

- 7a. The rim diameter varies between 5 and 20 cms, the average being 11 cms. This is very much within the range for aryballi.
- 7b. Because of the incompleteness of so many rims it is harder to be accurate about rim height, but the measurable samples give a range from 4.5 to 8.5 cms. The upper limit is probably too low.
- 8. Handles were probably of the strap variety and vertically placed, because no other kind has yet been found. One or two specimens still show small pierced lugs just below the lip (fig. VII n).
- 9. There is no information about the base, which is most likely to have been rounded.
- 10. There is no slip.
- 11. There is no decoration.
- 12. Its function is not certain, but it is likely to have been used for the storage of liquids and maize in grain form. Such a form in plainware, although with a pointed base, is associated with storehouses at Huánuco Pampa (Morris 1971 p. 139).

B. Relationships

- 1. The form is found sporadically upvalley.
- 2. It has not been noted in the collections downvalley, nor yet at Pachacamac.
- 3. There is nothing similar from the lower Rimac.
- 4. There is nothing similar from the upper Rimac valley.
- 5. There is nothing similar from the Chillón or Ancón.

6. At Chilca Bonavía depicts a form somewhat similar, made from a coarse red-brown paste (Bonavía 1958, lámina VII-29), but the rim does not curve outwards as much as the Lurín examples do.
7. There is nothing similar from Huarochirí.
8. It is worth noting that in other parts of Peru Cuzco forms are copied in local pastes and left undecorated. For example, as stated previously, most of the aryballi found in the storage houses at Huánuco Pampa were plain and, nearer Cuzco, Rivera describes a type called "Chinchero Llano", which includes forms such as the one shown here (Rivera 1976 pp. 35-39).

C. Dating

This form is dated as LH on grounds 1 b, c, and d. It is true that it is not found in any LH context at Pachacamac, but it is found at Avillay in pits 1 to 3, and in pit 8, all of which are LH contexts. Its shape relates it to the Inca aryballus and its restricted distribution strengthens an LH date. It is particularly found at sites with a great deal of Cuzco-style pottery, such as 164, 137, 136 and 104, all of which were under the influence of the Inca tambo at Sisicaya. It is significant that it is not found further downvalley, where there is less Inca pottery. If it were manufactured in the LIP, one would expect to find evidence for it at more sites.

Brown Ware - form VIASample - 17 rimsFigure IX a - mA. Description

1. This is a very rare form.
2. With the exception of two examples from site 164 (fig. IX a and j), all rims are found in the downvalley Huaycán sector of the study area.
3. All the rims come from surface collections.
4. There is no complete vessel, though it was probably never a very large one, because the maximum rim diameter is 16 cms. The vessel has been hypothesised as globular (fig. IX n), because of the similarities between its rim and that of Orange Ware form VI (fig. XXIX b). The handles are vertical and placed on the upper shoulder.
5. The rim rises either straight from the neck (fig. IX a, c, d, f - h, i and k), or with a very slight outward flare (fig. IX b, e, j, l and m). At the neck the interior angle formed by the juncture of rim and shoulder is obtuse, or, in two cases, a right angle (fig. IX f and i).
6. The lip is rounded and sometimes thinned (fig. IX f and g). Some specimens have a slight exterior bevel (fig. IX j and k) and one is slightly everted (fig. IX m).
7. Rim diameters vary between 8 and 16 cms.
8. The rim height varies between 1.65 and 5 cms.
9. Two sherds show traces of handles. In one specimen these were placed at the juncture of neck and shoulder (fig. IX g), and in the other they are 3 cms lower (fig. IX j), but above the point of the vessel's maximum diameter. It has been hypothesised that the base was

round, as with other Brown Ware forms.

10. There is no slip.
11. There is no decoration.
12. Its function could be either for storage or for cooking.

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley.
3. In the lower Rimac valley its nearest equivalent in plainware is type 5 at Fundo Pando (Ramos de Cox et al. op. cit. lámina 2, lowest drawing under tipo 5), but no information is given on the paste for this type.
4. There is nothing similar from the upper Rimac.
5. In the Chillón, Guffroy illustrates similar rims from Checta, although these have a flatter lip (Guffroy 1977 lámina 6g). Their rim diameters are from 12.50 to 15 cms, which is within the range of the Lurín specimens. However, it is not made clear in the text from which of Guffroy's six pastes these rims are made.
6. There is nothing similar from Chilca.
7. There is nothing similar from Huarochirí.
8. There is nothing similar from elsewhere.

C. Dating

This form is assigned an LIP date on ground 2 a. Its complete absence from all excavations, both mine at Panquilma and Avillay and those at Pachacamac, is significant, for if it

were being manufactured during the LH it ought to have occurred in one of the pits. In the Huaycán sector it occurs at sites with no Cuzco or form I sherds (31 and 33 for example), which is the main reason for assigning it to an earlier period.

Brown Ware - form VIB

Sample - 45 rims

Figure IX o - bb

Figure X a - k

A. Description

1. This is a rare form.
2. It is evenly distributed among all sectors of the study area. It is not found at Pachacamac.
3. All specimens come from surface collections, with the exception of one rim from the Panquilma excavation.
4. There is no complete vessel but its contour was possibly similar to that of form VIA, i.e. a globular vessel with a flaring rim, both sides of which are straight. The only traces of handles show these to be horizontal ones.
5. The rim differs from that of form VIA because of its greater flare, over 15° from the vertical. The angle on the interior of the rim, formed by its juncture with the shoulder of the vessel, is just obtuse, although there are some right angles (fig. IX q and X f). The exterior angle is obtuse. There is a greater range of variation in rim height, some rims being very small (fig. IX q) and some very tall (fig. X k).
6. The lip is rounded and sometimes thinned (fig. IX p, s, u - w), slightly everted in one case (fig. IX r) or

given a slight exterior bevel (fig. X b, g and j).

- 7a. Rim diameters vary between 8 to 24 cms, with the majority clustering between 10 and 18 cms.
- 7b. The rim height varies between 1.5 and 6.5 cms, both these being extreme cases, for the majority fall between 2 and 4 cms.
8. The only handles, found on a specimen from site 164 (fig. IX v), are set horizontally and are about 2 cms wide. They are 1 cm from the neck.
9. As with other Brown Ware bases, it is likely to have been round.
10. There is no slip.
11. There is no decoration.
12. It was probably a multi-purpose vessel.

B. Relationships

1. There are a few examples from upvalley.
2. There are at present no examples from downvalley.
3. There is nothing similar from the lower Rimac.
4. There is nothing similar from the upper Rimac.
5. In the Chillón Guffroy illustrates a form from Pucara, which is also made from a brown paste (Guffroy 1977 fig. 6d). The rim diameters, however, are larger than those of the Lurin, being from 25 to 35 cms.
6. There is nothing similar from Chilca.
7. There are possible examples from Huarochirí (cf. fig. XCVIII h), but the collections there have few complete rims that show the juncture of rim and shoulder, so that there may be more than are at present apparent.

8. There is nothing similar from elsewhere. It may be worth noting that this form shows some similarities with form VB in Orange Ware (cf. fig. XXVI).

C. Dating

It is assigned an LIP date on ground 2 a and for similar reasons to those given for the previous form. It comes from layer 10 of the Panquilma excavation, a layer associated with a small structure possibly antedating the LH. Its absence from any of the well-documented LH excavations at Avillay and Pachacamac and its appearance at such sites as 177 and 160, which have no Cuzco-style sherds, are also significant in its dating.

Brown Ware - form VII

Sample - 23 rims

Figure X 1 - bb

A. Description

1. This is a very rare form.
2. It is found in the upvalley portion of the study area from Chontay to Sisicaya, except for one occurrence at site 51 in Huaycán.
3. All rims come from surface collections.
4. There are no complete vessels and since existing rims do not extend more than a couple of centimetres below the neck, no complete form has been hypothesised.
5. The rim flares outwards from an obtuse angle at the neck interior and to a greater degree than the rims of form VIB. It also differs from these in having curved rather than

straight contours, the interior profile being convex and the exterior concave.

6. The lip is rounded (fig. X l - m, aa, bb) and sometimes thickened (fig. X o - q), or occasionally flattened (fig. X r, s, w - y).
- 7a. The rim diameter varies from 9 to 18 cms.
- 7b. The rim height varies from 2.80 to 5.50 cms.
8. There is no evidence for any handles.
9. There is no evidence for the base.
10. There is no slip.
11. There is no decoration.
12. Its function was probably multiple, as with other Brown Ware vessels.

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley.
3. There is nothing similar from the lower Rimac.
4. There is nothing similar from the upper Rimac.
5. In the Chillón Guffroy's form IV from Santa Rosa de Quives II shows a certain similarity to this one (Guffroy 1977 fig. 5 f.), although the flare is less pronounced. Unfortunately he does not give a paste description for this form.
6. There is nothing similar from Chilca.
7. From Huarochirí there are some similar forms (fig. XCVIII i) that Thatcher dates as LIP. These are also in a brown paste.
8. It should be noted that some EIP sites in the study area show a related jar form (fig. XCVII g - i), although the rim

height is less (2.5 to 3.5 cms), (Earle 1969 p.18 table 3; p.47 fig. 4). Earle thought the form was prevalent upvalley although it is also found at Pachacamac (fig. XCVII i).

C. Dating

It is dated as early LIP going back into the MH on the ground 2 c. It is not found in any LH excavation at Avilley or Pachacamac. On the other hand it is not found at those sites with a fair amount of sherd material, but that lack Cuzco-style pottery. Given its general similarities to the EIP form and that the sites where it does occur, such as 137, 164 and 113, all have occupations of this earlier period, it seems likely that its date is closer to the MH. It is interesting that the forms described by Guffroy come from a site dated EIP to MH (Guffroy 1977 p.49).

Brown Ware - form VIIIA Sample - 15 rims Figure XI

A. Description

1. This is a very rare form.
2. It is found only in the upvalley portion of the study area around Sisicaya.
3. There are eleven rims from surface collections and four from excavations at Avilley.
4. There are no complete vessels, but because of the similarity in lip treatment between it and form I, it is hypothesised that the vessel body is also similar;- oval

- or globular with vertical strap handles and a rounded base.
5. The rim is a tall straightish collar that in most cases expands slightly outwards in its upper third. Its interior varies from an almost straight line (fig. XI j) to a concave curve. The exterior has a convex profile, though in one case it has become an inverted "S" shape (fig. XI f).
 6. The lip is flattened and thickened to overhang the interior as with form I (fig. XI a - d, f, i, j and m). In some cases it is merely rounded and/or thinned (fig. XI e, g, h and o).
 - 7a. The rim diameter varies between 8 and 25 cms.
 - 7b. The rim height varies between 7 and 10+ cms. Its height distinguishes it from form I vessels.
 8. Because of its similarities to form I the handles were probably strap and vertically placed at the maximum diameter of the vessel body.
 9. The base was probably rounded.
 10. Most specimens have no slip, but some from Nieve Nieve (site 136) have a red slip.
 11. There is no decoration.
 12. Large sherds found scattered over the site of Nieve Nieve are from almost complete vessels. There is no evidence of carbonisation on the exterior, so the vessel is likely to have had a storage function.

B. Relationships

- 1 - 8. At present nothing similar from elsewhere is known. In spite of its rarity it probably does exist in upvalley

sites as far as Cruz de Laya, and its absence is due to poor sampling.

C. Dating

The form is dated as LH on grounds 1 b and c. It is likely to go back into the LIP on ground 2 c. Although it has not been found in the Pachacamac excavations, its presence at Avillay in and around the main patio group and at site 136 in the planned sector close to the Colonial church suggests an LH date, as does its general similarity to form I. So does the fact that it is found only upvalley at sites containing Cuzco pottery, that were likely to have been under the sphere of influence of the Inca tambo. On the other hand, there are two examples from sites that contain no Cuzco pottery: 105 and 177 (fig. XI e and l). It should be noticed that both these have a different lip treatment from the norm and it may be that they are earlier LIP versions of a form that in the LH had the form I-type lip.

Brown Ware - form VIIIB

Sample - 9 rims

Figure XII a - g

A. Description

1. This is a very rare form.
2. It is found only in the upvalley sectors of the study area from Chontay to Sisicaya.
3. There are seven examples from surface collections and two from excavations at Avillay.

4. As with form VIIIA there are no complete vessels, but because of the general similarity in lip treatment between this form and forms I and VIIIA, it is hypothesised that the body was similar, with a rounded base and strap handles.
5. Like form VIIIA the rim is tall, but the interior profile tends to the convex and the exterior to the concave.
6. The lip is flattened and thickened, with a slight interior overhang. For the purposes of comparison a probable EIP rim (fig. XII f) has been included. It is made from a coarser brown paste, with a rounded lip, and is much thicker than the late examples.
- 7a. The rim diameter varies from 14 to 16 cms.
- 7b. The rim height varies from 7.5 to 10.8 cms.
8. No handles can be correlated with this form, but they were probably strap handles and vertically placed.
9. The base was probably rounded.
10. There is no slip.
11. There is no decoration.
12. It is likely to have had a storage function.

B. Relationships

1. There is a similar rim from an upvalley site.
- 2 - 8. There is nothing similar from elsewhere.

C. Dating

On the same grounds as those given for VIIIA it is suggested that this form is LH. There are, however, two examples from sites without Cuzco pottery, so that it may predate the LH.

Brown Ware - form IXSample - 35 rimsFigure XII h - 1Figure XIIIFigure XIV a - cA. Description

1. This is a rare form, but an easily recognisable one.
2. It is found in the downvalley sectors with one example from Chontay. It is not found at Pachacamac.
3. All rims come from surface collections.
4. Some almost complete specimens have been found near looted cemeteries at Panquilma, so that a reasonably accurate description is possible (fig. XIV b - c). The height of the vessel varied from 13 to 15 cms and the body had the shape of an ellipsoid, the width being greater than the height. Two vertical loop handles (so called because the two ends are placed close to one another) were placed just on or above the point of maximum diameter. The neck of the vessel was very small, being no more than 6 cms in diameter and averaging 3 cms. It corresponds closely to the rim diameter. The goblet-like rim was also very small in comparison with the vessel size and surface area. In contrast to most Brown Ware forms, this one has a light burnish which is most visible on the rim, where the polishing tracks are vertical. One form from upvalley (fig. XIV a) is unusual in that the rim has a small collar just above the juncture of rim and shoulder. It is also noticeable that the rim diameter is wider than the range given for form IX.
5. The rim itself has the shape of a small onion or tulip perched on the vessel body. From the neck upwards it

swells out and then contracts so that the rim diameter is generally slightly smaller than the neck one.

6. The lip is rounded (fig. XII j, fig. XIII c, f, g, j and n), though very often it is also thinned from the interior, with a slight bevel (fig. XII l, fig. XIII a, d, e and o).
- 7a. The rim diameter varies from 1 to 6 cms.
- 7b. The rim height varies from 2.1 to 7.4 cms, although most rims are from 3 to 5 cms in height.
8. The small loop handles (fig. XIV c and fig. XII h) average 2 cms in width.
9. The base was gently rounded (fig. XII h).
10. There is no slip.
11. There is no decoration.
12. The sherds of this form are usually found associated with looted tombs. Its rim size precludes any domestic function other than the storing of liquids. It is likely to have been manufactured purely as a grave offering.

B. Relationships

1. There is nothing similar from upvalley sites.
2. From downvalley there is a similar rim from a site in the Manchay sector. There are some similar rims from Pachacamac, but made from orange paste with a different shaped vessel body. This is an inverted pear shape with a flat base. One vessel (catalogue number 2736 1104/1112A) comes from the Uhle excavations in front of the Temple of Pachacamac. Its rim diameter was not measured but it is comparable to those from the Lurín. The other comes from the Bandelier collections (catalogue number B 206, fig. XL1ld)

and has a height of 18 cms and a rim diameter of 4.15 cms.

This rim diameter falls within the range of variation of the Lurín samples, but the vessel is taller.

3. There is nothing similar from the lower Rimac.
4. There is nothing similar from the upper Rimac.
5. There is nothing similar from the Chillón valley, but Reiss and Stübel illustrate a similar rim form from a grave vessel at Ancón, although the vessel body is different (Reiss and Stübel 1880-1887 vol. III, plate 98 no.8).

They do not give a rim measurement.

- 6 - 8. There is nothing similar from the south, the highlands or elsewhere.

C. Dating

The form is dated as LIP probably the early part, on grounds 2 a, b, and c. Since the form is not found in Strong and Corbett's Pachacamac excavation, or in Uhle's Temple of the Sun excavation, or in the Avillay or Panquilma excavations, or consistently associated with Cuzco-style pottery at sites where this occurs, it is unlikely to be LH in date. On the other hand, a related form is found in the Bandelier collections and in Uhle's excavation before the Temple of Pachacamac. A pencilled note accompanying the Uhle vessel says that it comes from the younger, western part of Gravefield I. By the latter he means the Temple of Pachacamac excavation. It appears to have accompanied a goblet in the Epigonal style, which would strengthen an LIP date, especially the early part. In addition, in an appendix to his study of the Uhle collections from Ancón, Strong (1925) classifies all the Reiss and Stübel

pottery. He assigns a Middle Ancón I? period date to the Ancón specimen mentioned in part B-5, which also suggests that this rim form dates from the late MH. Finally, there is some evidence from a tomb group at site 57. This is a group of graves situated on a small spur overlooking the main part of the site. The graves have been looted and the vessels broken and scattered around. A collection was made and proved to have no Brown Ware form I (which is fairly common on the main part of the site). There were some other forms to be discussed later and three form IX rims. The graves are architecturally distinct from the rectangular later structures and the pottery associations here confirm the LIP date for this form.

Brown Ware - form X

Sample - 13 rims

Figure XIII A
a - h

A. Description

1. This is a very rare form.
2. It is found in all sectors of the study area with the exception of Piedra Liza.
3. All examples come from surface collections.
4. There are no complete vessels, but a large rim sherd from Panquilma (fig. XIII A h) suggests that the height of the vessel was around 20 cms, that it was slightly pear-shaped and had a small curving rim and vertical strap handles.
5. The rim form is that of a slightly enclosed bowl with a diameter equal to, or just less than, the diameter of the

neck constriction, except for a specimen from site 84 (fig. XIII A d) whose rim diameter is wider than the neck orifice.

6. The lip is usually rounded (fig. XIII A c, e, g, and h) and in some cases thinned (fig. XIII A a, h). In the specimen from site 84 it is thickened.
- 7a. The rim diameter varies between 10 and 20 cms.
- 7b. The rim height varies between 3.20 and 5 cms.
8. There are two positions for the vertical strap handles. One is just above the point of maximum diameter of the vessel body (fig. XIII A h). The other extends from half way up the rim to the upper shoulder (fig. XIII A i). The handles vary in width between 1.60 and 2.5 cms.
9. The base was probably rounded.
10. There is no slip.
11. There is no decoration.
12. It should be noted that the rims of this form differ from those of form IX in having a larger diameter and being less curved inwards.

B. Relationships

1. There are no examples from upvalley.
2. There are no examples from downvalley. At Pachacamac there are similar rim forms in Orange Ware (form VIIB), with handles placed both on the body of the vessel and from rim to shoulder (fig. XLII a - c). These are found in both the Bandelier collections and in Uhle's excavations in front of the Temple of Pachacamac. The rim diameter

of these vessels ranges from 6 to 14 cms, which makes them smaller than the Brown Ware examples.

3. From the lower Rimac at Fundo Pando there is a similar form, tipo 3, (Ramos de Cox et al., op. cit. lamina 2, tipo 3, upper drawing), but no details of paste or size are given and it is likely to be made from an orange paste.
4. There is nothing similar from the upper Rimac.
5. There is nothing similar from the Chillón or Ancón.
6. There is nothing similar from Chilca.
7. There is nothing similar from Huarochirí.
8. There is nothing similar from elsewhere, although it should be noted that in the Virú valley there is a plainware vessel made from various pastes with a similar sort of rim, called cambered by Ford (Ford and Willey 1949 fig. 9 and 10). It dates from the late EIP onwards and the rim diameter becomes wider through time.

C. Dating

The form is dated as LIP, albeit tentatively, because of the small sample. This dating is on grounds 2 b and c. The sample is too small and the distribution too spotty to be sure of its associations with Cuzco pottery. Certainly it is absent in the excavations into LH material in the valley and at Pachacamac. There is its general similarity to the Orange Ware form VIIB, particularly in the placement of the handles. In Orange Ware form VC, handles extending from the upper shoulder to half-way up the rim are a feature of the LIP, which is where this form probably belongs.

Brown Ware - form XISample - 10 rimsFigure XIV d - jA. Description

1. This is a very rare form.
2. Its distribution is concentrated downvalley in the Huaycán sector, with one other specimen from Chontay.
3. There are eight examples from surface collections and two from Patterson's excavation at Pachacamac.
4. There are no complete specimens, but large rim sherds show that the form was that of an enclosed or restricted bowl, probably with a rounded base. There is a variation in wall thickness, the vessel from Panquilma being thinner than the one from site 109 (fig. XIV h and f).
5. There is no separate rim for this form.
6. The lip shows a variety of treatments. It can be rounded (fig. XIV d and h), flattened (fig. XIV e and j), or everted (fig. XIV g).
- 7a. The rim diameter varies between 9 and 28 cms. The upper limit is unusual, most diameters being from 9 to 12 cms.
- 7b. Not applicable.
8. There appear to have been no handles.
9. It is likely that the base was rounded.
10. There was no slip.
11. There was no decoration.
12. It should be noted that bowls are extremely rare in the Lurin in the late periods. All these examples are found associated with late forms and are not thought to date to the EIP. They do not resemble the EIP bowls described by Earle (1969 pp. 26 - 30 fig. 7 - 9).

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley. At Pachacamac there are some enclosed Orange Ware bowls in the Bandelier collections (not illustrated here) but these are two out of a total of 236 vessels. They are both plain and one has a flattened lip similar to that of fig. XIV f.
- 3 - 8. There is nothing similar from neighbouring areas. There are plainware enclosed bowls from the Virú valley for the late periods (Ford and Willey 1949 fig. 9 and fig. 10).

C. Dating

Because there are so few examples and the distribution is spotty, any dating must be tentative. The form is found in Patterson's excavation into LH refuse at Pachacamac. On the other hand, there are two examples from site 57, from a tomb group on a small spur overlooking the main part of the site. This tomb group, mentioned previously, also contains form IX vessels. It is likely therefore that this form was manufactured during both periods.

Brown Ware - form XII

Sample - 5 rims

Figure XIV k - m

A. Description

1. This is a very rare form which comprises rim sherds from both open bowls and plates.

2. The sherds are found at only three sites in the study area. The plates come from site 164 in the Sisicaya sector and the open bowls from opposite ends of the study area, two from site 31 and one from 177.
3. All specimens come from surface collections.
4. The plates are almost flat (fig. XIV k and m); the bowls have a certain depth to them, but are open rather than enclosed. There are no handles and the bases for the plates may well have been flat.
5. Not applicable.
6. The lip treatment varies from a rounded lip on the plates (fig. XIV k and m) to an exteriorly-thinned lip on the bowl (fig. XIV l).
- 7a. The rim diameter of the plates varies from 14 to 38 cms. On the bowls it is 18 cms.
- 7b. Not applicable.
8. There were no handles.
9. The base of the plates was probably flat, given their similarity to Inca decorated plates. That of the bowls was probably rounded.
10. There is no slip.
11. There is no decoration.
12. Plates and bowls possibly belong to different periods and may have different functions.

B. Relationships

1 - 8. There is nothing similar from neighbouring areas.

There are, of course, Cuzco-style plates, usually made from a different paste. These are found at some sites in the study area and are discussed under the Cuzco style.

Many of the plainware plates made from orange and brown pastes are probably the lids of pedestal base ollas.

The fact that the latter also occur at site 164 (see form XIII below) strengthens this supposition. Against this is the fact that the upper rim diameter is too large for a lid for any of the pedestal base ollas found at site 164, although I have measured similar size plates at Pachacamac.

C. Dating

Since the plates are probably lids they can be dated to the LH on grounds 1 c and d. Since most imitations of Inca shapes in local wares (forms V and XIII) occur upvalley in the Sisicaya sector, it is not surprising to find Brown Ware plates there. The open bowls are different. The scant sample comes from sites where there is no Cuzco pottery. On grounds 2 b and d it is suggested that they are probably from the LIP.

Brown Ware - form XIIISample - 10 rimsFigure XIV n - v

1. This is a very rare form.
2. It is found only upvalley in the Chontay and Sisicaya sectors.
3. There are seven examples from surface collections and three from excavations at Avillay. I have also noted other examples, as yet uncollected, at site 136.
4. There are no complete vessels, but the similarity of the rim to that of the Inca pedestal base pots (fig. LXXVIII and fig. LXXIX) suggests that this form may have had a similar shape. Site 164 has also yielded a pedestal base in Brown Ware (fig. XIV w), which strengthens this hypothesis. To date no long ribbon-like handles, such as are usually associated with these vessels, have been found in Brown Ware, but this may be due to sampling error or to the fact that these pots were never very numerous in Brown Ware. At any rate, calculated on rim size, these vessels would not have been very tall, 20 cms at the most, with a base 18 cms in diameter.
5. The rim is a very tiny flare, sometimes no more than a slight exterior indentation (fig. XIV n) extending outwards from a small orifice and forming an acute angle at the neck interior. It is not very high.
6. The lip is rounded (fig. XIV o, p and v), thinned (fig. XIV q, r, and t) or flattened (fig. XIV s).
- 7a. The rim diameter varies between 9 and 16 cms, well within the range of those discussed in the section on the Cuzco style.

- 7b. The rim height varies between 0.40 and 0.80 cms.
8. No handle has yet been found, but it is assumed to be the horizontally-placed long ribbon loop, as found on the Cuzco style vessels (fig. LXXVIII).
9. The pedestal base shown here measures 18 cms in diameter. This is within the range for examples from Pachacamac.
10. There was no slip, not even a light burnish, as with some Inca specimens.
11. The Inca vessels had small nubbins, although none has yet been found on the Brown Ware vessels.
12. Their function would have been similar to that of the Inca vessels described in the section on the Cuzco style.

B. Relationships

1. There is nothing similar from upvalley.
2. The only similarities from downvalley are with the Orange Ware versions of the same vessel from Pachacamac.
3. There may be something similar from the lower Rimac where there is a small flaring rim from Fundo Pando (Ramos de Cox et al., op. cit., lámina 2, tipo 1, upper 2 drawings), but no details are given on paste or size.
- 4 - 8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LH on grounds 1 b, c, and d. Firstly, rims are found in the Avillay excavations, two coming from pit 10, which was placed outside the courtyard of the Inca structure and yielded both Cuzco-style and Colonial pottery. Secondly, this form is not found at sites without Cuzco-style pottery and is

generally restricted to those where Cuzco pottery is found in abundance, i.e. the Sisicaya sector. Thirdly, there is the general similarity to the Cuzco-style form.

DARK BROWN WARE

The same general remarks apply to this ware as to Brown Ware. All four forms were manufactured by the coiling process, the lower part of the vessel being modelled separately from a single lump of clay. The handles, which could be either vertical or horizontal, were modelled separately and attached to the vessel. Body sherds for all forms range from 0.45 to 0.85 cms in thickness and rim sherds from 0.65 to 0.95 cms in thickness.

The paste is similar to the brown one in most respects and is used almost exclusively for the four forms described. Some Brown Ware III and IV forms are also manufactured from it. All forms are jars, the lack of bowls having been noted previously. The texture of the paste is grainy and it crumbles even more easily than does the brown one, because of poor firing. White quartz and other inclusions are visible on the surface in similar proportions to those of the brown paste. These inclusions range in size from 0.20 cms to 1.0 cm.

Surface treatment is the same for all vessels. The interiors were scraped and exhibit a roughish surface. The exteriors were smoothed with a hard instrument, usually with horizontal strokes. They were also given a slight burnish, which is most noticeable around the lip interior. There was no slip and the only decoration occurred on form III vessels. This consisted of an undulating snake modelled out of the vessel wall along the upper shoulder. The body of the snake ended in a thick rounded head and along its length, at regular intervals,

are cane or reed-stamped circles to indicate markings.

The firing of this paste was more poorly controlled than that of the brown one, for which reason the two pastes are differentiated. The poor firing resulted in a noticeable grey to black streak in the core, and patches on the vessel surface. In colour terms, the difference between the two pastes could be considered as the difference between sienna and umber. The colour of the streak is Munsell 5YR 4/1 to 3/1. The core colour varies between dark red-brown and dark red-grey, Munsell 5YR 4/2 to 3/2. The surface colour is dark red-brown to dusky red, Munsell 5YR 4/2-3/2 to 3/4-3/2. This surface colour resembles that of modern vessels from Santo Domingo de los Olleros more closely than does the surface colour of the brown paste.

Dark Brown Ware - form ISample - 116 rimsFigure XVA. Description

1. This is a common form.
2. It is found in all sectors of the study area, though it is commoner upvalley in Chontay and Sisicaya than in Huaycán. It is not found at Pachacamac.
3. There are 96 rims from surface collections, seven from excavations at Panquilma and thirteen from excavations at Avillay.
4. There are no complete vessels. It is suggested that the vessel was similar to form II because the rims of both are of similar proportions.
5. The rim interior forms an obtuse angle with the neck and flares upwards and outwards, being straight (fig. XV b, h and p), slightly concave (fig. XV d, f and g), or convex (fig. XV i, r and t). The curve of the rim exterior is also variable (fig. XV b, f and r).
6. The lip is always thickened and rounded, but there is no sharp juncture that marks the thickening, as there is with form II.
- 7a. The rim diameter varies between 12 and 30 cms.
- 7b. The rim height varies between 3.30 and 8 cms.
8. There are no handles than can be associated with this form.
9. There are no bases that can be associated with this form.
10. There is no slip. The rim interior and exterior are lightly burnished.
11. There is no decoration.

12. This form has been considered separately from form II because of the lip treatment.

B. Relationships

1. There are a few examples from upvalley.
2. There are a few examples from downvalley.
3. In the lower Rimac types 8 and 10 from Fundo Pando may be related, but it is likely that they were made from an orange paste (Ramos de Cox et al., op. cit., lámina 2, tipo 8 and 10. The drawing referred to in both cases is the uppermost one).
4. There is nothing similar from the upper Rimac.
5. There is nothing similar from the Chillón, although form II is found there.
6. In Chilca forms 20 and 29 from Puerto Viejo may be related (Bonavía, 1959, lámina 7).
7. There are possibly related forms from Huarochirí made from a brown paste. (See fig. XCVIII j and k).
8. There are no related forms from elsewhere.

C. Dating

This is considered to be an LIP form on grounds 2 b and d. Because it is found in the lower levels of the excavation at Panquilma, in pits 10 and 11 at Avillay, and in a room of the main patio group, it is considered to have lasted into the beginning of the LH.

Dark Brown Ware - form IISample - 280 rimsFigure XVIFigure XVII a - fA. Description

1. This is a common form.
2. It is found in all sectors of the valley, although it is more common upvalley than downvalley. It is not found at Pachacamac.
3. There are 238 rims from surface collections, fifteen from the excavation at Panquilma and 27 from excavations at Avillay.
4. There are no complete vessels, but a good-sized sherd from Panquilma (fig. XVI a), suggests a globular body and horizontal handles, although vertically-placed ones should not be discounted.
5. The rim is similar to that of form I. It flares upwards, either straight or slightly concave from an obtuse interior angle.
6. The difference between this form and form I lies in the lip treatment. There is an obvious line of juncture between the rim interior and the thickened lip, which can extend outwards in a very exaggerated manner (fig. XVI m, n and q).
- 7a. The rim diameter varies between 10 and 36 cms, the last being an extreme measurement, since the majority of rims are between 14 and 18 cms.
- 7b. The rim height varies from 3.30 to over 11 cms.
8. The horizontal handle from fig. XVI a measures 3.05 cms in width.

9. No base can be associated with this form but, as with all Brown Ware, it was probably rounded.
10. There is no slip.
11. There is no decoration.
12. Because of the distinctive lip treatment this form is easily recognisable from tiny fragments.

B. Relationships

1. There are a few specimens from upvalley.
2. There are a few specimens from downvalley.
3. There is nothing similar.
4. There is nothing similar.
5. Guffroy depicts similar forms from the Chillón from the sites of Santa Rosa de Quives, Checta and Pucara (Guffroy 1977, lámina 6 b and c). At Pucara these forms, named by him II and III, are made from a brown paste with coarse inclusions. His form II, which has the wider rim, varies in diameter between 25 and 27.5 cms and his form III between 7 and 12.5 cms (Guffroy 1977 p. 29). These three sites are all dated as LIP and LH, but at none does he mention finding pottery in the Cuzco style.
6. In Chilca Bonavía depicts a possibly similar form but does not describe the paste colour (Bonavía 1959, lámina VII, 12).
7. There are possibly related forms from Huarochirí (fig. XCVIII 1 and m), which are made from a brown paste, but there are few specimens in the collections.
8. There is nothing similar from elsewhere.

C. Dating

This form is dated as LIP on grounds 2 b and d. Since it is found in the lower levels at Panquilma, in the rooms and courts of the main patio group excavations at Avillay, as well as in pits 10 and 11 there, it probably lasted into the early part of the LH.

Dark Brown Ware - form III

Sample - 72 rims

Figure XVII g - g
Figure XVIII a - j
Figure XIII A j

A. Description

1. This is a less common form.
2. It is found in all sectors of the study area.
3. 41 specimens come from surface collections, one from Patterson's excavation at Pachacamac, thirteen from the excavation at Panquilma and seventeen from excavations at Avillay.
4. There is no complete vessel, but a large sherd from site 107 suggests the reconstruction given in fig. XIII A j. Vertical handles are hypothesised because they are more common amongst the unassociated handles in the collections. The snake was modelled on the upper shoulder of the vessel.
5. The rim interior forms a curve (fig. XVII l and fig. XVIII j), or else an obtuse angle (fig. XVII g and j) at the neck juncture. It flares sharply outwards in a straight line (fig. XVII k) or a convex curve (fig. XVIII h). The line of the rim exterior is either

straight or concave.

6. The lip is thickened and flattened to give a bevelled appearance, sometimes with a slight overhang (fig. XVIII f).
- 7a. The rim diameter varies between 13 and 38 cms, although these are extreme measurements since the majority of rims fall between 20 and 28 cms.
- 7b. The rim height varies between 2.10 and 4.50 cms.
8. At present no handles have been associated with this form.
9. At present no base has been associated with this form.
10. There is no slip.
11. This is the only form amongst Brown and Dark Brown Ware forms, that can be associated with a specific decoration. This is a modelled snake undulating along the upper shoulder of the vessel. On analogy with Orange Ware forms there could have been two snakes, one either side of the handles, but, since the placement of handles on this form is uncertain and there are very few body sherds with the snake depicted on them, I am inclined to think there was only one snake. The tail is simply rounded (fig. XVII g) and the head is indicated by widening the body at the other end (fig. XVIII a). A series of cane-stamped circles extends along the body (fig. XVII i). Because of the find from 107 (fig. XVII g and fig. XIII A j), it was possible to associate Dark Brown Ware body sherds with a snake modelled on them with a particular rim form. This association is confirmed by Patterson's excavation where the rim and the body sherds also occurred separately. Since this was the only Dark Brown form in the excavation, the decorated sherds obviously went with this rim.

12. The snake is a common decorative motif on Andean pottery from the EH to the LH.

B. Relationships

1. Nothing similar has been observed in upvalley collections.
2. Similar rims and body sherds with the snake are found in collections from downvalley. It was noted previously that it appears at Pachacamac in Patterson's excavation, though not in Strong and Corbett's.
3. There is a similar form depicted in Ramos de Cox et al. op. cit., lámina 2, tipo 18 (the lower drawing), but there is no information on the paste. The authors make no mention of sherds with the snake motif although, in all fairness, that particular study concerns rims rather than body sherds.
4. There is nothing similar from the upper Rimac.
5. In the Chillón Guffroy does not depict a similar rim form, but he does depict body sherds with the modelled snake and cane-stamped circles (Guffroy 1977, fig. 6 m and n). One comes from Checta and one from Santa Rosa de Quives. He does not associate these with any particular vessel form (1977 pp. 41 and 45). Both sites are dated as LIP and LH.
6. In Chilca Bonavía mentions rim and body sherds with cane-stamped circles made on a coarse brown paste (Bonavía 1959 pp. 149-151, lamina XI 1-9). Yet none of these is associated with a modelled snake, although one of the rim forms is similar to that of form II (lámina VI - 1).

7. There is nothing similar from Huarochirí.
8. Cane-stamped circles occur on LIP pottery of the Central Highlands (i.e. behind Huarochirí), although not in association with a modelled snake. (See Lavallée 1967, her type A2, Patan Qoto, p.422, plate 5b.) These vessels are made from an orange paste.

C. Dating

The form is dated as LH on grounds 1 a and d. Although it is not found in the Temple of the Sun excavations, the fact that it does occur in Patterson's excavations, which were dug into LH materials, is significant. Also, unlike the other three Dark Brown forms, it is absent from sites and sectors of sites where there is no Cuzco-style pottery. Although the snake motif is found on the Central Coast in the Lima style and earlier styles (Kroeber 1926 p.28, plate 88d; Gayton 1927 p.311, plate 95d; Stothert 1980 p.283 figs. 12 and 13), it cannot yet be traced in the late MH or LIP pottery, but reappears in the LH. (See also the discussion under Orange Ware, form VA.)

<u>Dark Brown Ware - form IV</u>	<u>Sample - 16 rims</u>	<u>Figure XVIII</u>
		<u>k - u</u>

A. Description

1. This is a very rare form.
2. With the exception of one specimen from Panquilma this

form is found in the upvalley sectors of Chontay and Sisicaya. There are no examples from Pachacamac.

3. Fifteen rims come from surface collections and one from the surface of the excavated refuse at Panquilma.
4. There is a complete specimen from site 12, which is outside the study area (fig. XVIII k). The vessel is 53 cms high and has a maximum diameter of 47 cms. The vertical strap handles are placed at the point of maximum diameter and are 3.2 cms wide. The interior rim diameter is 22 cms.
5. The rim form is distinctive and easily recognisable from the tiniest fragment. It curves inwards for a couple of centimetres from the obtuse interior neck angle and then ends in a large labial flange, from 2.50 to 4.50 cms long.
6. The lip is rounded and sometimes thinned as well (fig. XVIII u).
- 7a. The rim diameter varies between 12 and 30 cms, the majority falling between 18 and 22 cms.
- 7b. The rim height varies between 1.70 and 3 cms.
8. The handles appear to have been vertically placed and of the strap kind.
9. The base was rounded from the evidence of the whole specimen and it was difficult to stand the pot upright.
10. There was no slip.
11. There was no decoration.

B. Relationships

1. There are no rims from upvalley.
2. There are a few rims from downvalley as far as the Manchay sector.
3. There is a similar rim from Fundo Pando (Ramos de Cox et al., op. cit., lámina 2, tipo 2, middle drawing), but no indication of the paste used.
4. There is nothing similar from the upper Rimac.
5. Guffroy depicts a similar form from Checta (op. cit., fig. 6h). He gives no indication as to which of his pastes this form was made from, but from his general remarks it is likely to have been a brown one (op. cit., pp. 28-29 and 40).
The form is also found at Santa Rosa de Quives and at this site it is made from a red paste with a grey interior streak (Guffroy op. cit., p.44).
6. There is nothing similar from Chilca.
7. There is nothing similar from Huarochirí.
8. There is nothing similar elsewhere.

C. Dating

This form can be dated as LIP on grounds 2 b and d.

The fact that it is missing from all excavations suggests that it did not last into the LH as did forms I and II. The apparent example from the Panquilma excavation comes from the surface of the refuse.

ORANGE WARE

In contrast to the Brown Ware, there is a greater number of complete vessels in Orange Ware and the forms themselves are more varied than the Brown Ware ones, although they bear a general relationship to them. There is also the same lack of bowls, although these are apparently more frequent on the coast itself (Gene McDougale, personal communication). The complete vessels show that several forms were mould-made rather than coiled. In particular, forms V to XI seem to have been made in two halves and joined horizontally. The interiors of these jars are smooth in comparison with those made by coiling and the line of juncture between the halves is often visible on vessels with an exterior carination (fig. XXXII p). In such vessels the base is nearly always rounded or pointed rather than flat, and this is a trait prevalent in the LH. There are also ring bases and small tripod legs (figs. XLVII m and LVI h), which it has not yet been possible to associate with rim and body forms. Handles were modelled separately and then attached to the vessel, as were certain other appendages like frogs (fig. LII j), lugs (figs. XLV g and LI e), earrings (fig. XXXVII e) and faces (fig. XXXVIII i). In the LH designs like the snake (fig. LII b), and the bird (fig. LVI b), were modelled by pinching out a small amount of clay from the vessel wall and scoring around the design.

The paste has been subdivided into three kinds. There is a medium paste whose rims vary in thickness from 0.60 to 1.15 cms and whose body sherds vary from 0.45 to 0.75 cms. This is used for all forms except miniature bowls and the huge storage jars.

It is also used at Pachacamac to make aryballi and two-handled dishes. A finer variety of the medium paste is used there to make the Cuzco-style plates. The coarse paste that is used for form XVI, a large storage jar, has a body thickness of over 1 cm and a rim thickness from 1 to 2 cms. The fine paste that is used for some miniature bowls and jars has a thickness from 0.35 to 0.45 cms. The texture of all paste varieties is less grainy than that of the Brown Ware and the sherds crumble less easily, as has already been noted. The inclusions are visible on the sherd surface and in the core. They are usually light in colour, from white to grey, and many resemble quartz particles. It is not known yet whether they were deliberately added. If so, the temper is probably sand. In the medium variety the particles are usually between 0.20 and 0.50 mm in diameter, although the occasional one may reach 1 mm. In the coarse variety, microscopic examination showed grey and white particles that obviously came from the granodiorite rock in the valley. These vary between 1 and 2 mm in diameter. In the fine variety, inclusions are scarcely visible, being less than one tenth of a millimetre. As with the Brown Ware, the inclusions have rounded edges, so that it is unlikely that they were deliberately crushed.

The interior of the mould-made jars is smooth with only a small amount of pitting. On the coiled jars the interior was scraped with a hard instrument to give an appearance like the one depicted by Shepard (1956, p.188, fig. 13d). The exterior was wiped and smoothed to give a very even surface, which is most noticeable in specimens from the LH. The rims often show striations from the cloth used to smooth them (cf. Shepard, op. cit. p.188, fig. 13f). In the LIP smoothing tracks were used to give a

decorative pattern on form V jars. They were made from shoulder to base in a zigzag fashion. Vessels were left matte, only a few showing traces of a burnish. These are, firstly, some late MH bottles and flasks from Pachacamac, that are related to the Teatino style (fig. XLIX e); secondly, certain fancy vessels that are rare in the study area, such as the bird-face jar from site 57 (fig. LXXXVI b), and the Red, Black and White Geometric jar from Panquilma (fig. LI a); thirdly, some of the miniature bowls and jars (fig. XLVI a, b, and h).

About 50% of the Orange Ware is slipped. On the slipped jars, which are usually matte, there may be one of two overall slips. The commoner was a red slip which appears on vessels during the latter part of the LIP and lasts through the LH. There is also a rare white slip which appears to be coastal in origin, for it is found on only a handful of sherds in the study area¹. It has a yellowish tinge to its hue, being Munsell 10YR 8/2 to 8/3. The red slip, which always covers the whole jar exterior, is Munsell 10R 4/6, 5/4 and 5/6. In the LH it often takes a deeper value, such as 10R 4/4. It may carry additional painted decoration before firing, either in white or white and black. The white has the same colour as the white slip and the black is 5YR 3/1 to 4/2. Other kinds of decoration include incision and punctuation, which are usually executed on an unslipped or a white-slipped pot, and the modelling of snakes, bumps, faces and other appendages. These are usually executed on red-slipped jars. A combination of modelling and painting is also found on the red-slipped jars.

Handles and bases are given a separate treatment after all the forms have been discussed. The terms used in the description

are self-explanatory except for loop handles and strap handles (fig. XLVII 1 - 1). The latter are D-shaped when viewed from the side and of even width. They are better made than their Brown Ware counterparts. Loop handles are squatter and thicker. When viewed from the side, they look like a small loop pressed into the vessel body. From the associations, it would seem that there is a temporal difference between the two types, loop handles being earlier than the strap ones.

The firing was carried out in an oxidising atmosphere and generally well-controlled, so that few sherds exhibit a grey streak in the core. Moreover, there are few grey patches on any vessel surface, except on some of the flasks and bottles from Pachacamac where they may have been deliberate. The colour of the fired paste varies from Munsell 2.5YR 5/6 to 5/8 and from 6/6 to 6/8 at the core, and from 2.5YR 5/6 to 6/6 and 6/4 at the surface. What is important about the firing are the occasional vitrified spots on jars from both Pachacamac and the study area. These spots occur on both LIP and LH pottery, one Cuzco two-handled dish being covered with a green glassy substance, (see also the face-neck jar from site 177, fig. XXXVI e). This phenomenon suggests that the Orange Ware was fired to a much higher temperature than the Brown Ware. Further support for a higher firing temperature is provided by the fact that other sherds are cracked and twisted from overfiring, which is not seen in Brown Ware.

Many of the forms and decorative features in this ware have been termed part of the Huancho, Ichimay or Sub-Chancay styles by other authors (Villar Córdova 1935; Iriarte Brenner 1960; Bueno 1978b and ms; Jijón y Caamaño 1949 pp.311-315), but the

limits of each of these styles have never been clearly defined. In my view they are all different names for the same style, found in the lower Chillón, Rimac and Lurín during the late periods. They are related to the Orange Ware described here. At present it seems preferable not to give Orange Ware a style name until a more complete description can be made by including samples from other neighbouring valleys.

NOTES

1. When the road to the Temple of the Sun at Pachacamac was resurfaced during the early seventies, the workers found many white-slipped sherds, (Ponciano Paredes Botoni, personal communication). For other white slipped fancy vessels from the Lurín see Lothrop and Mahler 1957 plate VIb, f and g.

Orange Ware - form ISample - 38 rimsFigure XXA. Description

1. This is a rare form, probably because it was only manufactured during the LH.
2. It is found in all sectors of the study area as well as at Pachacamac.
3. There are thirteen examples from surface collections, fourteen from Strong and Corbett's excavation, nine from the Panquilma excavation and two from pit 10 at Avillay.
4. There are no complete vessels from the study area, although there is a large informative sherd from Panquilma (fig. XX a). In addition there is a complete vessel (catalogue number 31956 (3314)) from Uhle's excavations in cemetery VI in the northwest part of Pachacamac. This has not yet been illustrated, though Pardo (1957 vol. II, lámina 4, fig. f) illustrates a similar vessel from Cuzco. Pardo (op. cit. p.577) gives the following dimensions for his vessels:-
9 cms high and a rim diameter of 11 cms. Its maximum diameter is not given nor is the handle size. The vessel is lenticular in shape, with a rim diameter smaller than the maximum diameter, and two vertical strap handles extending from rim to upper shoulder (fig. XX i and n), or placed a couple of centimetres below the rim (fig. XX h and p). A pair of snakes undulates around the upper shoulder, each one placed between the handles and on opposite sides of the pot.
5. The rim itself is very small, being a slightly thickened extension of the vessel body and giving the impression that the clay has been turned over at the neck and pressed down.

6. The lip is flattened (fig. XX b, d, e, j, k and o), or slightly rounded (fig. XX c, f, g, i and l), and in one case thinned from the interior (fig. XX a). The lip on the Uhle specimen was flattened.
- 7a. The rim diameter varies between 10 cms and 16 cms upvalley, and between 12 cms and 18 cms at Pachacamac. There is one thicker-walled sherd from Panquilma, which has a rim diameter of 20 cms, but this seems extreme.
- 7b. The rim varies in height from 1.1 cms to 0.20 cms.
8. The handles are wider and thinner than normal Orange Ware handles. They vary in width between 2 and 2.50 cms.
9. The base was rounded.
10. These vessels are all slipped red.
11. The rim is usually painted white (fig. XX a), though this may have worn off in some specimens. One specimen from Chaimayanca (fig. XX h) has small groups of three white lines placed perpendicular to the rim. The moulded undulating snake of fig. XX a and f is decorated with white blobs to simulate markings¹. Some snakes, however, were left plain red, as were those on the Cuzco specimens. The snakes on the vessel excavated by Uhle have been painted all white, and above and below them is a line of small bumps or protuberances, made when the clay was still plastic, by pressing a cane or stick outwards from inside the pot. These bumps occur with and without the snake on form VIIA vessels (fig. XXX g). Some handles have a white circle painted around the base (fig. XX p).
12. The complete pot excavated by Uhle has its lower half covered in soot, so that these pots were probably used over a fire

for cooking purposes. Some of the Strong and Corbett sherds are also charred.

B. Relationships

1. There is nothing similar from upvalley.
2. There are a few specimens from downvalley.
3. Tipo 13 from Fundo Pando (Ramos de Cox et al., op. cit. lámina 2, tipo 13, upper drawing) may be related.
There is nothing similar from Maranga.
4. There is nothing similar.
5. There is nothing similar.
6. From Chilca Bonavía (op. cit., lámina VI 25, and lámina VII 8 and 9) illustrates several enclosed vessels that may be related, but all are said to be completely plain.
7. There is nothing similar.
8. Mention has already been made of the fact that Pardo includes this form in his classification of Inca pottery. It is also included in Rivera's classification of the pottery of Chinchero (Rivera 1976 p.29, fig. 43-18; pp.35-36), where it is considered as belonging to the Chinchero Llano type. However, Bingham (1915 and 1930) makes no mention of anything similar for Machu Picchu.

C. Dating

The form is dated as LH on grounds 1 a, c, and d. Its resemblance to the highland vessels is surprising for a form that is classified as a plainware cooking pot. The fact that Uhle's specimen comes from the northwest part of the town is also significant, because only LH vessels are found there (see Appendix II). It would seem therefore that along with the

Cuzco style proper the Inca conquest introduced some plainware forms and non-Cuzco motifs to the coast.

NOTES

1. Strong and Corbett (1943 fig. 10c) illustrate a sherd from one of these vessels, as if the snake were red. When I examined the sherd there were traces of white blobs.

Orange Ware - form II

Sample - 38 rims

Figure XXI a - o

A. Description

1. This is a rare form.
2. It is found in the Huaycán, Chontay and Sisicaya sectors of the study area, but is commoner downvalley.
3. Nineteen specimens come from surface collections, one from Patterson's excavation at Pachacamac and one from Strong and Corbett's. Seventeen rims come from the excavation at Panquilma, but there are none from Avillay excavations.
4. There are no complete vessels. From the rim sherds it resembled an enclosed bowl, but not as enclosed as form I. Judging from the curve of the vessel wall from the rim, it would be around 15 cms high. Two sherds show traces of horizontal handles placed from 1 to 2 cms from the rim. Some vessels were slipped and some unslipped.
5. The form is differentiated from form I by its rim, which slopes inwards at an angle between 20 and 45 degrees from the horizontal. In fact the rim is indicated by a slight groove on the exterior before the neck orifice (fig. XXI b, g, m and o). Sometimes this groove is more pronounced

(fig. XXI c, f and h), and on other occasions the edge of the orifice is thickened and ends in an inward bevel (fig. XXI d and e).

6. The lip is thickened and usually flat (fig. XXI i, l and n), or else has a slight groove in it (fig. XXI g, h and j).
- 7a. The rim diameter ranges between 12 and 20 cms, the majority being 14 cms.
- 7b. There is no measurable rim height.
8. The handles are the usual neatly formed Orange Ware ones and vary between 1.55 and 2 cms in width.
9. The base is unknown but, because of the lack of flat or pointed bases, it was probably gently rounded.
10. Most sherds are slipped red with a white decoration. One sherd was slipped white (fig. XXI f) and three were unslipped (fig. XXI d, i and j).
11. The decoration consisted of a crudely-painted white band around the rim and lip. This sometimes dribbled onto the upper shoulder. White vertical bands or panels were painted from this band (fig. XXI a and b). Sometimes the white paint was merely daubed over the vessel surface, as happened on fig. XXI g. The handle here has a white band painted around each end. The part-handle in fig. XXI o has white paint daubed over it. The only sherd with a different kind of decoration is in fig. XXI c. There are small protuberances spaced at regular intervals along the upper shoulder. These are modelled in a different fashion from those found on forms I and VII, for there are no marks of any kind in the vessel interior and the protuberances have a sharper point than the others. Beside one of the bumps is part of a raised curve, which may or may not represent a snake. The depth of the curve is

deeper than the one shown by most snakes.

12. At present no charred sherds have been found from this form, so it may not have been used over a fire.

B. Relationships

1. There are no examples from upvalley.
2. There are a few examples from downvalley.
3. At Fundo Pando in the lower Rimac the nearest example is the bottom drawing of tipo 20 (Ramos de Cox et al., op. cit.). There is nothing similar from Maranga.
4. There is nothing similar.
5. There is nothing similar.
6. There is nothing similar from Chilca, although one of Bonavía's types has a similar profile (Bonavía op. cit. lámina VI no. 25), but it is plain.
7. There is nothing similar.
8. There is nothing similar from other areas.

C. Dating

The form is dated as LH on grounds 1 a and d. It is, however, very rare in excavations at Pachacamac¹, and non-existent at Avillay. Therefore it probably goes back to the latter part of the LIP, but at the moment it is impossible to prove this.

NOTES

1. Corbett wrote a preliminary unpublished paper on the Cut I plainware which was later discarded. In it he drew a rim profile similar to that of form II, but since he classified it in a category of "small flaring rims", there is no way of knowing how many of this form were in Cut I.

Orange Ware - form IIISample - 17 rimsFigure XXI p - q
Figure XXII c - kA. Description

1. This is a very rare form.
2. The form is found from Chontay downvalley.
3. There are no examples from excavations at Avillay or Pachacamac, but there are three from excavations at Panquilma. Fourteen come from surface collections.
4. There are no whole specimens from the Lurín, but a vessel with a similar rim was seen on exhibition at Puruchuco in the Rimac valley (fig. XXII c). This is approximately 80 cms high with a rim diameter of 30 cms. It has a pointed base and no handles.
5. There is no separate rim.
6. The lip is formed at the orifice by thickening the wall of the vessel and ending it with a bevel, usually straight but rounded in one example (fig. XXII d).
- 7a. The rim diameter varies between 16 and 40 cms.
- 7b. This measurement is not applicable.
8. There were no handles associated with the specimen from Puruchuco.
9. The base was most likely pointed. In 1968 at Panquilma the pointed base of a large jar was found, presumably in situ. It was set well into the ground in a courtyard. The rim, however, was missing.
10. The majority of the vessels were unslipped. Only one rim sherd (fig. XXI p) shows a red slip.
11. There was no decoration.

12. Most of the rims illustrated are made from the coarse orange paste. A few, such as those of figs. XXI p and XXII i, are made from the medium orange paste. These large jars were probably used for storage of liquids, such as chicha, or possibly maize in grain form. At Santo Domingo de los Olleros large jars with pointed bases are used for storing chicha during fiestas, but they are leant against the wall and not sunk into the ground. Dr. E.J. Cobbing, in a personal communication, noted that similar jars are currently used for storing maize in the Majes valley.

B. Relationships

1. There is nothing similar upvalley.
2. There are a few similar rim sherds from downvalley.
3. The example from Puruchuco has been mentioned. Tipo 1 and tipo 20 from Fundo Pando may be related (Ramos de Cox et al , op. cit., lámina 2, lowest drawing for each tipo).
4. There is nothing similar.
5. There is nothing similar.
6. One form in Bonavía's drawings may be related (Bonavía op. cit., lámina VII - 7).
7. There is nothing similar.
8. Little mention is made of large storage jars in publications on ceramics. Form XVI is a similar sort of jar, but with a different rim and decoration. Two other large jars from the central coast are drawn in figs. XXII a and b to show the variety of rim and decoration that can be found.

C. Dating

The form is likely to be LIP on ground 2 b. It is true that there are only three examples from sites without Cuzco pottery, but this is probably due to poor sampling. Its absence from the excavations at Pachacamac is significant in view of the presence of form XVI, another large jar. Peasants have informed me that large storage jars tend to have a long life span as they are not easy to make. Since there are three examples from Panquilma, it is likely to have lasted to the beginning of the LH.

Orange Ware - form IV

Sample - 39 rims

Figure XXIII

Figure XXIV a - d

A. Description

1. This form is rare.
2. It is more common in the Huaycán sector than in the Chontay and Sisicaya ones. It is also found at Pachacamac.
3. Ten specimens come from surface collections, six from Patterson's excavation and nine from Strong and Corbett's. There are also fourteen from the Panquilma excavation.
4. There is an almost complete specimen from Patterson's excavation. This shows a low, wide bowl shape, with what was probably a rounded base and a small rim with tiny vertical handles from rim to upper shoulder. The rim diameter was 18 cms and the height around 9 cms. This sherd is likely to have been decorated on the rim, as were similar vessels, but it is very charred and only traces of white

paint on the rim remain.

5. The rim is between 1.20 and 2.50 cms long and flares out from the neck interior quite sharply, forming a right angle or less with this. The interior is straight or slightly curved (fig. XXIII h).
6. The lip is rounded (fig. XXIII c, d and g), sometimes flattened (fig. XXIII f and e), or thinned (fig. XIII m and o).
- 7a. The rim diameter varies from 12 to 26 cms, the majority falling between 18 and 20 cms.
- 7b. The rim height varies between 0.40 and 1.20 cms.
8. The width of the handles varies between 0.85 and 2.70 cms. They are always relatively small, with a short span and a slight waist at their centre (fig. XXIII q).
9. The fragment of the vessel in Patterson's excavation shows that the base was rounded.
10. Most vessels were slipped red before the decoration of rim and handle. A few were decorated on an unslipped surface, as in fig. XXIV a and d.
11. The decoration was confined to the rim interior and the handles. The rim interior was painted white and this white band usually extended onto the upper shoulder. A decoration of black lines was painted on the rim interior. These could be zigzags (fig. XXIV a); wavy lines set between groups of lines perpendicular to the rim (figs. XXIII h, and XXIV b); a St. Andrew's cross between similar groups of black lines perpendicular to the rim (fig. XXIII d); cross hatching (fig. XXIII c); and groups of black lines on their own (fig. XXIII l). One rim from Panquilma is

different (fig. XXIV d), for it has no white slip and is decorated in dark maroon with a zigzag made of groups of diagonal lines in alternate directions. The intervening triangles are filled with small dots. Not all handles were decorated. The one in fig. XXIV a was painted black on its upper half and another in fig. XXIII q is white with black horizontal lines around it.

12. It should be noted that two specimens (fig. XXIII i and q) exhibit spots of incipient vitrification and that both come from different excavations at Pachacamac. In view of the vessel's low height and the lack of charring, it most likely had a storage or service function.

B. Relationships

1. There are no examples from upvalley.
2. There are a few examples from downvalley.
3. Tipo 6 (top drawing) from Fundo Pando may be related, but it is not clear in the text or drawing whether it is a bowl or a jar (Ramos de Cox et al., op. cit., lámina 2).
4. There is nothing similar.
5. There is nothing similar.
6. Bonavía describes a black on white style from Chilca, whose forms may be related (Bonavía op. cit., pp.139-142, lámina I - 4). The designs, however, are different from those that appear on the rims of form IV, being placed on a white band on the upper shoulder of the vessel and not on the rim interior. The handles are vertical from rim to shoulder with black horizontal lines. This style is associated with form X (face-neck jars) and some Cuzco-style sherds.

7. There is nothing similar.
8. There is nothing similar elsewhere. There is a small jar from Pachacamac, illustrated by Strong and Corbett, which shows similarities (Strong and Corbett 1943, p.55, fig. 9f). The rim is different but it is slipped white and has black lines around it. It also has a slight burnish, whereas form IV is matte.

C. Dating

It is dated as LH on grounds 1 a and d. This is strengthened by the similarity of the design in fig. XXIII d to the Cuzco lattice A design (Rowe 1944, p.47). It may go back to the end of the LIP since a crude black, white and red style is known for that period, (Uhle 1903, plate 8). However this particular form with the decoration described has not yet been found in a securely dated LIP context.

Orange Ware - form VA

Sample - 252 rims

Figure XXIV e - p
Figure XXV

A. Description

1. This is a common form.
2. It is found in all sectors of the study area.
3. There are 145 examples from surface collections, three from Patterson's excavation at Pachacamac and twelve from Strong and Corbett's. 73 come from the excavation at Panquilma and nineteen from excavations at Avillay.
4. There are several complete specimens. The one illustrated (fig. XXV a) comes from Puruchuco in the Rimac valley, and

the one almost complete specimen (fig. XXV h) comes from the Panquilma excavation. In addition, there is an unillustrated specimen from Uhle's excavations at Pachacamac, which has a snake decoration, as described below (catalogue number 31967 (2733 e)). The vessel is globular, around 16 to 24 cms in height. Some vessels were probably taller. It had a short flaring rim from 2.50 to 4.80 cms long. There were always two vertical handles that rise from the lip and end on the upper shoulder. The vessel was decorated in red and white.

5. The rim always flares outwards forming an acute angle, or a right angle, with the inner neck. The interior is straight and the exterior straight or slightly convex.
6. The lip is almost always flat, rarely rounded (fig. XXV j and k), and in one specimen has a slight exterior overhang (fig. XXIV n).
- 7a. The rim diameter varies between 12 and 24 cms, the majority falling between 14 and 18 cms.
- 7b. The rim height varies from 2.50 to 4.20 cms.
8. The handles vary in width from 1.85 to 3.30 cms. The top of the handle always rises from the flat lip and handles are always of even width.
9. The base was rounded.
10. The vessels were all slipped red, with white bands and lines painted over this, plus a modelled snake on some specimens.
11. The decorative possibilities are as follows:-
 - a) for the rim:-
 1. A red exterior and a red interior with a white band around the lip (this sometimes extends for one centimetre into

11. a) i) cont..

the rim interior or exterior); white band around the neck exterior (fig. XXIV f).

ii. As above, with white, vertical, slightly oblique panels, about 2 cm wide, set at intervals around the rim interior (fig. XXV e).

iii. Similar white panels on the rim exterior (fig. XXIV n).

iv. White daubed over the rim exterior and/or interior (fig. XXIV g, i and m; fig. XXV d).

v. A red interior with a white exterior (fig. XXIV h and l).

b) for the body:- There is always a red slip with either:-

i. A single snake moulded on each side of the vessel between the handles and at the same height as these. The snake is 4 mm wide and was usually decorated with small white blobs to simulate markings. These have often worn off (fig. XXV h).

ii. The same but with two snakes on each face (fig. XXV a).

iii. White vertical panels extending down the body from the white band at the neck. These vary from 2 to 4 cms in width.

Note: b-i and b-ii occur only with a-i.

c) for the handle:-

i. All red with a white band around the end of the handle on the shoulder (fig. XXV e).

ii. The same with white horizontal bands around the handle (fig. XXIV f and fig. XXV i).

iii. White daubed over the red handle (fig. XXV a and fig. XXIV g).

12. The example from Puruchuco and sherds from Panquilma show that the base was heavily charred to at least half way up the vessel. They were consequently used over fires in the preparation of food.

B. Relationships

1. There are some examples from upvalley.
2. There are many examples from downvalley.
3. At Fundo Pando tipo V (middle drawing) appears to correspond to form VA (Ramos de Cox et al., op. cit., lámina 2).

At Maranga, a pot with a flaring rim, vertical handles and a serpent decoration was found in a burial, no. LI of Huaca I, cemetery I (Jijón y Caamaño op. cit. pp.124-130). In the same huaca in disturbed soil another pot was found. It was similar to form VA and had b-iii decoration with horizontal handles (Jijón y Caamaño op. cit., p.315).
4. There is nothing similar.
5. There is nothing similar except for Guffroy's form IV (Guffroy op. cit., fig. 6d). It has the flattened lip, but the rim diameters are from 25 to 35 cms, which is larger than the Lurín samples.
6. There is nothing similar from Chilca where the lip of flaring-rimmed vessels is rounded rather than flat (Bonavía op. cit., lámina VI - 16 and 31).
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LH on grounds 1 a and d. There are enough specimens from the excavations into LH material at Pachacamac to secure this dating, for it is found in Uhle's excavations in the northwest part of the town as well as Strong and Corbett's. In the latter respect it should be mentioned that, in his unpublished paper on Cut I, Corbett drew similar flaring rims with flat lips. He placed them in a category "large flaring rims". The dating is strengthened by the fact that the cemetery I of Huaca I at Maranga appears to be LH (see Appendix II). Because there are a few specimens from a site that has no Cuzco-style pottery (site 71), it is possible that the form originates at the end of the LIP, although it is different from the kinds of flaring rimmed vessels found in the Bandelier collections. (See forms VB ii and VC).

Orange Ware - form VB-i Sample - 459 rims¹ Figure XXVI

A. Description

1. This is a common form.
2. It is found in all sectors of the study area.
3. There are 334 specimens from surface collections, seven from Patterson's excavation and twelve from Strong and Corbett's. There are 106 examples from the Panquilma excavation and eight from Avillay.
4. There is a complete vessel from Panquilma (fig. XXVI a) and also one from Uhle's collection, which is not illustrated here (catalogue number 31975 (2734)). The former is 25 cms

- high with a rim diameter of 13 cms. The body of the vessel is globular and it has a small flaring rim from 3 to 4 cms long. On the shoulder above the point of maximum diameter are two small horizontal handles, 1.85 cms in width.
5. The rim flares outwards for 3 to 4 cms, forming a right angle, or a little more than a right angle, with the interior neck (fig. XXVI e - g and v - w). The exterior and interior profiles are usually straight (fig. XXVI k, l and n). Sometimes the exterior profile has a slightly convex curve (fig. XXVI h, p, s and z). Sometimes the rim interior has a slightly concave profile (fig. XXVI m, o and x).
 6. The lip is always rounded (fig. XXVI b - d), and occasionally tapered (fig. XXVI s, x and z).
 - 7a. The rim diameter varies from 10 to 28 cms, the majority falling between 14 and 18 cms.
 - 7b. The rim height varies from 2 to 3.80 cms.
 8. The handles are horizontal and placed on the upper shoulder. They vary between 1.50 and 1.85 cms in width.
 9. The base is rounded.
 10. Some specimens are unslipped (fig. XXVI a, k, p, q, aa and bb). Some are unslipped with a white decoration (fig. XXVI e, h and o). Some have a red slip with white decoration (fig. XXVI j, s and t).
 11. The vessels fall into three categories:-
 - a) unslipped and undecorated.
 - b) slipped with a plastic decoration.
 - c) slipped with a painted decoration.

There is no more to say about category a). For category b) there is only one rim (fig. XXVI u) where the sherd is slipped white with cane-stamping around the shoulder just

below the neck. At present only one row is visible, though there were probably two or three on analogy with other vessels (see fig. XXX b). The circles are 5 mm in diameter and fairly evenly spaced. For category c) there are two general possibilities: either the vessel was slipped red and decorated in white; or else it was not slipped but was nevertheless given some white decoration. The variations are as follows:-

a) for the rim:-

- i) Red exterior, red interior, with a white band around the neck exterior (fig. XXVI b, j, x and y).
- ii) Red exterior, red interior, with a white interior rim band extending half a centimetre from the lip (fig. XXVI t).
- iii) Red exterior, red interior, with white daubed over the exterior (fig. XXVI n).
- iv) Red exterior, red interior, with a white vertical panel on the interior (fig. XXVI i).
- v) White exterior, red interior, with a white interior rim band (fig. XXVI f and l).
- vi) White exterior and interior (fig. XXVI c); or white exterior and white interior rim band extending a half centimetre down from the lip (fig. XXVI e, g, h and z).
- vii) Unslipped with white daubed over the exterior and, in certain cases, the interior (fig. XXVI o, r and w).

b) for the body:-

- i) Slipped red, with a double white snake painted at handle level (fig. XXVI j). This is also the decoration found on the vessel in Uhle's collection.

11. b) cont.

ii) White daubed over the red slip (fig. XXVI 1).

c) There is no decoration for the handles.

12. The vessel from Panquilma is charred up to the level of the handles. This suggests that it was used to cook food.

B. Relationships

1. There are a few examples from upvalley.
2. There are many examples from downvalley.
3. At Fundo Pando the only similarity is with tipo 16 (bottom drawing), though this flares outwards at an acute angle (Ramos de Cox et al., op. cit., lámina 2). At Maranga there appear to be three similar vessels from Huaca I, cemetery 2, burials CXCI to CXCV. These are described but not illustrated (Jijón y Caamaño op. cit., p.140-141). The vessels are red with horizontally-placed handles and a white band around either the lip or around the neck exterior. In his summary of the white on red style (Jijón y Caamaño op. cit., p.315), mention is also made of a similarly shaped vessel found in disturbed soil in Huaca I. This has white vertical panels on a red ground, but horizontal handles. The decoration is similar to that given for VA vessels, though to my knowledge there is no VB-i vessel with such decoration in the Lurín.
4. There are no similar vessels from the upper Rimac valley, but cane-stamping does occur as a method of decoration on the exterior of orange bowls. The designs are executed in a similar fashion to the Lurín ones (Milla Villena op. cit., laminas 4 and 5).

5. There is nothing similar from the mid-Chillón around Santa Rosa de Quives. At Macas further downvalley there are vessels with slightly flaring rims and horizontal handles, though the bodies are less globular than the Lurín examples (Trimborn 1969, p.264, figs. F and K). There is no decoration except for press-moulded designs, apparently dotted ones, that are placed in panels on the shoulder and beneath the point of maximum diameter. The size range of these vessels is comparable to those from the Lurín, for they are from 18 to 25 cms in height and from 10 to 15 cms in rim diameter. They are made from an orange paste, but there is no slip or painted decoration. The pottery is thought to date with the site from 1300 to 1450 AD.
6. There are no directly comparable forms from Chilca, but cane-stamping is used as a decorative technique on Orange and Light Brown Ware (Bonavía op. cit., lámina XI). It is found both on jar rim exteriors, where it never occurs in the Lurín, and on the jar bodies and bowl interiors. The size of the circles is variable, another trait found in the Lurín.
7. There is nothing similar.
8. There is nothing similar from other areas.

C. Dating

The form is dated LH on grounds 1 a and LIP on ground 2 a. Vessels that are unslipped could belong in either period and probably do, but until more data are available on their associations, this must be considered a working hypothesis. With regard to decorated vessels, it is possible to assign some of them to one or other of the periods. Those with the snake

design must be LH, since the design originates with the utilitarian vessels associated with Cuzco-style pottery in the highlands, as discussed under form I. Vessels with cane-stamping are LIP. This decorative technique is found on the central coast in the EH (Scheele 1970, p.37), and continues sporadically through the EIP (Patterson 1966, fig. 15 e). In the highlands around Huarochirí cane-stamping is found on vessels from MH and LIP sites (Thatcher 1969 and fig. XCVIII n - q, Browman 1970), but it has not been found on any sherd excavated from LH material at Pachacamac. On the other hand, it is present on vessels in the Bandelier collections which can be dated to the late MH and LIP (Feltham 1980 ms). It is also found on at least one site in the valley that has no Cuzco-style or Cuzco-associated pottery. For these reasons its appearance is likely to be confined to the LIP. Finally, there are the vessels decorated in white on an unslipped or on a red background. These date back to the LIP, as well as falling in the LH. This is because they are found at sites such as 175 and 71, both of which have no Cuzco-style pottery. There is also a strong case for white on red styles being pre-LH in the Rimac valley (see Appendix II for a discussion of the Maranga excavations). Although they do not occur in the Bandelier collections, the latter probably do not span the entire LIP, and the white on red style made its appearance towards the end of this period.

NOTES

1. The total includes rims from VB-ii as well as VB-i, for the subdivisions were not clear until the Bandelier collection had been examined, by which time the sherd counts had already been made.

Orange Ware - form VB-ii Sample - 459 rims Figure XXVII

A. Description

1. This is a common form.
2. It is found in the Huaycán sector of the study area and in the Bandelier collections from Pachacamac. It occurs sporadically upvalley.
3. (See section A. 3 for form VB-i). There are no examples from the Pachacamac excavations made by Patterson or Strong and Corbett. There are no examples from the Panquilma or Avillay excavations. Of the 334 rims of both forms in the surface collections, around 50 rims of type VB-ii come from a cemetery at site 35, and some 30 rims from sites 31 and 33.
4. There are several very large sherds from one of the cemeteries at Panquilma and 35 complete vessels from the Bandelier collections. The size range of these is illustrated in fig. XXVII b - d. The vessels had a globular body and a flaring rim, with small loop handles attached on the upper shoulder or the point of maximum diameter. There is also a specimen from Puruchuco in the Rimac valley, that has no handles (fig. XXVII a). In the Bandelier collections the vessels range from 14 to 24 cms in height and the rim diameters are between 12.90 and 19 cms. This vessel form differs from VB-i in the rim, which is longer and taller, the kind of handles, and its lack of slip or decoration.
5. The rim flares outwards with a length from 2.80 to 5.20 cms and forming an angle at the neck interior, which varies from acute to slightly obtuse. The profile is straight (fig. XXVII h, i, and k - m), but sometimes the interior has a

- convex curve (fig. XXVII f, g and j), and sometimes the exterior is slightly convex (fig. XXVII n - q).
6. The lip is rounded (fig. XXVII h, m and n) and generally tapered as well (fig. XXVII f, g, and j - l).
 - 7a. In the study area the rim diameters vary from 11 to 22 cms.
 - 7b. In the study area the rim height varies from 2.40 to 4.40 cms.
 8. The handles are always of the loop type. They vary between 1.35 and 2.60 cms in width.
 9. The base is usually rounded, but a few specimens from the Bandelier collections have bases that are slightly flattened, with a visible ridge between the base and the wall of the vessel.
 10. There is no slip.
 11. There is no painted decoration. A point of interest, however, lies in the fact that a few specimens from the study area and from the Bandelier collections exhibit diagonal wiping striations from the neck to the point of maximum diameter, where they change direction creating a herringbone effect on the exterior surface. The wiping marks on the majority of the complete vessels are either horizontal or vertical.
 12. Of the 35 complete vessels from Pachacamac only one is charred, which suggests that these particular vessels were either manufactured especially for mortuary purposes, or that they had a storage function before being placed in the grave. Squier (1967 p.215, lowest drawing on the left) illustrates one of these vessels that came from a grave. He states that it contained food. There is little charring associated with the valley specimens.

B. Relationships

1. There is nothing similar from upvalley.
2. There are many sherds of this form from downvalley sites.
3. There is nothing similar from Fundo Pando. At Maranga, however, there is a handleless version similar to that in fig. XXVII a (Jijón y Caamaño, op. cit., p.41, fig. 22). This comes from Huaca III, burial CLXXXVI, and was associated with a double-spouted pot and a small open bowl (Jijón y Caamaño, op. cit., p.59, fig. 39). From the same Huaca, burial CVI, comes a vessel that appears similar in form to that of VB-ii, but the rim interior is slipped red with a white zigzag band outlined in black. There are small loop handles. The accompanying vessels were a bottle in human form in the Chimú style, a globular vessel with press-moulded decoration, and a plain vessel like the one he illustrated. Unfortunately these associated vessels are only described but not illustrated.
4. There is nothing similar.
5. There is nothing similar from the Chillón. Guffroy's form V may correspond (Guffroy op. cit., fig. 6 f), but the rim diameters are larger than the Lurín examples.
6. The only related rim form from Chilca is illustrated in Bonavía op. cit., lámina VI, no. 19. The relationship is tenuous, however, for there is probably only one example.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

It is dated as LIP on grounds 2 a, b and c. It should be noted that it is found at such sites as 31 and 33, where there is no Cuzco-style pottery or Brown Ware I. It is also found in the Bandelier collections and not in Strong and Corbett's excavation. It is interesting that there is no specimen from Uhle's collection, which confirms his view that he excavated the later tombs in graveyard I (see Appendix II). It is possible that the version without handles dates back to the late EIP or the MH. At the National Museum in Lima there is a large handleless storage jar currently on exhibition. It is about 1 m in height and similar to the one illustrated here (fig. XXVII a), except for its size and for its curvilinear decoration in black, white and orange in a Maranga style (according to its caption). The jars with handles are therefore probably early LIP.

Orange Ware - form VC

Sample - 72 rims

Figure XXVIII

A. Description

1. This is a less common form, although it must be remembered that certain sherds may belong to VC, but be classified as VB-ii because they do not show the handle.
2. It is found in all sectors of the study area.
3. There are 71 specimens from surface collections and only one from an excavation. This is from Panquilma where it was found in layer 9.
4. There are complete vessels in the Bandelier collections (fig. XXVIII a). There are five of these with a squat ovoid

- body and a flaring rim. They differ from forms VA and VB-i and ii in that the handles join a point half way up the rim to a point on the upper shoulder. They never originate at the lip itself. In the Bandelier collections the height of the vessels ranges between 12 and 22 cms, and the rim diameters between 15.90 and 24.60 cms.
5. The rim flares outwards and forms an obtuse or a right angle with the neck interior. The profile has a generally straight exterior and interior (fig. XXVIII e - g, i and j). Sometimes the interior is slightly convex (fig. XXVIII c, l and m), or slightly concave (fig. XXVIII k).
 6. The lip is always rounded (fig. XXVIII d, n and o), and usually tapered (fig. XXVIII b - h, i and k).
 - 7a. The rim diameter varies between 12 and 22 cms, the majority being 18 cms.
 - 7b. The rim height varies between 2.30 and 4 cms.
 8. The handles (fig. XXVIII b and e) are not of the loop or the strap-type. They are usually twice as wide at their base as at their centre. Some are very narrow indeed and have the appearance of being pinched in the middle. They vary in width between 0.90 and 1.80 cms.
 9. In the Bandelier specimens the base is rounded, with one exception where it is slightly flattened.
 10. There is no slip.
 11. All the Bandelier vessels are plain except one (catalogue number B 350) which has small diagonal slashes placed at irregular intervals around the neck exterior. There are a few other sherds from the valley with this kind of decoration, all from VB-ii or VC vessels (fig. LVI a).

Other vessels have white paint daubed over the exterior of the vessel and the rim interior (fig. XXVIII g, i, j and o). One further example from Chontay (fig. XXVIII n) has a series of small jabs around the upper shoulder below the neck. This type of decoration is unique.

12. One specimen from the Bandelier collections has a charred base, but the vessels are most likely to have had a storage function, like VB-ii.

B. Relationships

1. There are no examples from upvalley.
2. There are some examples from downvalley.
3. At Fundo Pando tipo 5 (top drawing) looks similar to form VC because of the placement of the handles (Ramos de Cox et al., op. cit., lámina 2).
4. There is nothing similar.
5. In the Chillón, a similar plainware pot is illustrated from Macas (Trimborn 1969, p.264 G). The handles originate half way up the rim. The only difference lies in the flat base of the Macas vessel.
6. There is nothing similar.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

As with the previous form, it is dated as LIP on grounds 2 a, b and c. It is interesting that one rim occurs in the Panquilma excavation in layer 9, which is the layer associated

with the structure into which the refuse was thrown. There are no examples from Strong and Corbett's or from Patterson's excavation; nor are there any from the excavations at Avillay, where the form does not even occur on the surface.

Orange Ware - form VD

Sample - 82 rims

Figure L

A. Description

1. This is a less common form, although comparable with VC in number of rims.
2. It is found in all sectors of the study area.
3. There are 79 examples from surface collections and three from excavations. Two of the latter come from Pachacamac:- one from Strong and Corbett's and one from Patterson's excavation. A further example comes from pit 7 at Avillay.
4. There are no complete specimens, but mention should be made of a possibly related form in the Uhle collections (catalogue number 2761 (976)). (This is not illustrated here because exact measurements were not taken.) The vessel comes from the oldest part of gravefield I and has a globular body with a slightly flaring rim which meets the neck interior at a very obtuse angle. There are two small horizontal handles on the shoulder above the point of maximum diameter.
5. The difference between this and other forms in Class V lies in the rim profile which flares gently outwards. It is always curved and never straight, so as to present a convex rim interior and a concave rim exterior. The angle at which the rim meets the neck interior is about 135° (see fig. L).

6. The lip is rounded and usually tapered (fig. L d - g and j - u). In a couple of cases it is flattened (fig. L h and i).
- 7a. The rim diameter varies from 8 to 28 cms, although the majority fall between 12 and 16 cms.
- 7b. The rim height varies from 2.80 to 6.90 cms.
8. There are no handles associated with rim sherds from the study area. The vessel in the Uhle collections has small horizontal handles.
9. The base was probably rounded because so few Orange Ware flat bases have been found in the study area. The vessel from the Uhle collections has a rounded base.
10. Most of the vessels were unslipped. This includes the vessel from the Uhle collections.
11. Two sherds from the study area have white decoration (fig. L h and j). In one case this extends half way down the rim interior and covers the rim exterior. In the other, white paint is daubed over the rim exterior.
12. There is little indication of charring on these rims and only a slight blackening on the base of the Uhle vessel. Therefore it is likely that they had a storage function.

B. Relationships

1. There are no examples from upvalley.
2. There are some examples from downvalley.
3. There is nothing similar from Fundo Pando or Maranga.
4. There is nothing similar.
5. Guffroy (op. cit., fig. 5 f) illustrates a somewhat similar rim from Santa Rosa de Quives in the Chillón. He believes

it to belong in the EIP (op. cit., pp.45-47).

Unfortunately it is not made clear in the text which of three types of paste this form is made from. Its rim diameter varies between 10 and 15 cms, and the height between 5 and 7 cms, which is within the range of the Lurín valley examples. At Macas downriver form E is closest to the Uhle vessel (Trimborn 1969, p.264 E). It is unslipped, has small horizontal handles and a gently flaring rim with a probably obtuse interior angle.

6. There is nothing similar.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

Although there are single examples from excavations into LH material at Pachacamac, its relative abundance at sites without Cuzco pottery, such as 71, 31 and 109, leads one to think in terms of an earlier date. The obtuse angle at the neck interior is similar to that found in EIP plainware (fig. XCVII h and i). Furthermore, there are usually EIP sites close to the sites where it is found. The single sherd from Strong and Corbett's excavation comes from block 45, which is surrounded on all sides by blocks containing EIP plainware sherds, and may belong amongst these. The sherd from Patterson's excavation, although it best falls within category VD, may be a variant of one of the later forms, such as VA or VB-1. The absence of a red slip from these sherds is interesting, since all Orange Ware forms dated as LH usually have a red slip. For these reasons and on ground 2 a the form is considered to be late MH and early LIP.

Orange Ware - form VISample - 50 rimsFigure XXIXA. Description

1. This is a rare form.
2. It is found in all sectors of the study area, but not upvalley from site 109.
3. There are 46 examples from surface collections, three from the Panquilma excavation and one from pit 11 at Avillay.
4. There are two whole vessels from Pachacamac, from the Bandelier collections (fig. XXIX a and b). These are globular vessels with a straight rim that does not flare outwards, but forms an obtuse angle with the neck interior. The exterior angle is well defined and also obtuse. There are two possible positions for the handles, which are vertical. In fig. XXIX a they extend from the upper shoulder to half way up the rim. In fig. XXIX b, they are placed at the point of maximum diameter. The handles are of the loop variety. There are nine similar vessels, three with the handles on the body and six with the handles from rim to shoulder. The height of these vessels varies from 13 to 17.50 cms. The rim diameter varies from 9.40 to 15.70 cms. There is also a variant form of which there are only five examples. All these come from Panquilma. They have been placed in this category because of their straight rim, but they have a flat base, a groove around the mid-point of the vessel, and a shorter, straight rim with a poorly defined neck (fig. XXIX c, d and t). The handles are vertical and span the groove. The height of the complete vessel was 12.50 cms and the rim diameter was 9 cms.

5. The rim extends straight upwards from the obtuse angle at the neck interior (fig. XXIX e - s). It is of even thickness and the angle at the neck exterior is clearly defined. In the variant form the interior and exterior neck angles are less well defined.
6. The lip is rounded (fig. XXIX e, l, n and o), but usually tapered as well (fig. XXIX f, h - k, p - r). In one case it is slightly everted (fig. XXIX g). In the variant form it is rounded (fig. XXIX d) and slightly tapered (fig. XXIX t).
- 7a. The rim diameter varies from 7 to 18 cms, the majority being from 10 to 12 cms. The rim diameter of the variant form ranges from 9 to 13 cms.
- 7b. The rim height varies from 2.40 to over 7 cms. In the variant form the height ranges from 1 to 1.15 cms.
8. The handles are always vertically placed in either of the two positions mentioned previously. The handle width varies between 1.10 and 1.75 cms. In the variant form the handle width is 1.20 cms.
9. The base of the vessels in the Bandelier collections was gently rounded and the vessels from the study area were probably similar. The base of the variant form was flat and 5 cms in diameter (fig. XXIX c).
10. Only one of the vessels from the study area has a red slip (fig. XXIX p). The vessels from the Bandelier collections are unslipped. The most complete vessel of the variant form also has a red slip (fig. XXIX c).
11. There is no decoration except for white daubed over some rim exteriors (fig. XXIX f and q). There is no decoration on the variant form.

12. Four of the pots from the Bandelier collections are charred up to the handles. The rest show no signs of use over a fire, but two have cotton string twisted through the two handles, as if they were suspended, or as if this were an aid in carrying the vessel. It is likely, therefore, to have had a dual function of storage and cooking.

B. Relationships

1. There are no examples from upvalley.
2. There are some examples from downvalley.
3. The most similar rim from Fundo Pando is tipo 5 (Ramos de Cox et al., op. cit., lámina 2, bottom drawing) although this has a slight inward slant. Nothing similar from Maranga is illustrated.
4. There is nothing similar.
5. The most similar rim from the mid-Chillón would appear to be Guffroy's form VII (op. cit. fig. 6g). The rim diameters for this form vary from 12.50 to 15 cms, but there is no indication of the kind of handles the vessel possessed. At Macas there are vessels with a similar rim but horizontal handles (Trimborn 1969, p.264, fig. I). These are made from an orange paste and are unslipped. They are one of the commonest forms on the site.
6. There is nothing similar.
7. There is nothing similar.
8. There is nothing similar from other areas, neither have I been able to locate anything similar to the variant form in any publication. Given its small size and lack of decoration, it is unlikely to attract attention. There are, however,

large Brown Ware sherds from Panquilma, which have a shallow groove in them, similar to the one depicted on the pot in fig. XXIX c. They are probably from related vessels.

There is also a Black Ware vessel from Uhle's gravefield II at Pachacamac. This comprises two squat spheres joined vertically with small vertical handles spanning the join, (catalogue number 27345A (1340), not illustrated here).

The rim is straight and not very tall, and the base is rounded. It is the closest fancy form to the one under discussion.

C. Dating

The form is dated as LIP on grounds 2 a, b and c. It is true that there are some specimens from sites with Cuzco-style pottery. On the other hand, it is found at sites such as 109, 71, 31 and 33, which have no Cuzco pottery. It is not found in Strong and Corbett's excavations, or in Patterson's, or in Uhle's excavations in the northwest part of Pachacamac. Two of the three rims come from layers 9 and 9B at Panquilma, which are associated with the possible structure. The rims from pit 11 at Avillay come from mixed refuse. The most important fact is that it is found in the Bandelier collections, and also that a sketch of a similar vessel is to be found in Squier's drawing of the vessels found in a family grave at Pachacamac (Squier 1974, p.43). It has no clear associations with snake designs or white on red decoration and therefore is LIP.

Orange Ware - form VIIASample - 219 rimsFigure XXXFigure XXXI aA. Description

1. This is a common form.
2. It is found in all sectors of the study area.
3. There are 140 examples from surface collections, two from Patterson's excavation, four from Strong and Corbett's excavation and 61 from the Panquilma excavation. From the Avilley excavations there are twelve rims.
4. There is a complete vessel from Panquilma, as well as some almost complete ones from the same site. In addition, there are several examples from the Uhle collections and some are illustrated in his book on Pachacamac (Uhle 1903, p.66 figs. 84 and 85). From these and fig. XXX a - d it will be seen that the vessel has a globular body and a small cup or bowl-shaped rim. The type and placement of handles varies, as does the kind of decoration. The height varies between 18 and 33 cms, taking into consideration both the vessels in the Uhle collections and the ones from the study area. The rim diameter of all these vessels varies between 10 and 12 cms.
5. The rim is shaped like a shallow cup with a concave interior and a convex exterior. The diameter at the lip rarely equals the diameter at the neck interior. It is usually larger (fig. XXX e, g, h and j), but may be smaller (fig. XXX u). On certain specimens (fig. XXX b, g, l, x and aa), there is a ridge pinched out on the exterior of the rim. The interior and exterior neck angles vary between a right angle and an obtuse angle.

6. The lip is usually tapered, although in certain specimens it is merely rounded (fig. XXX q and u).
- 7a. The rim diameter varies between 8 and 16 cms, but there is only one example of the upper limit. The majority of rims fall between 10 and 12 cms in diameter.
- 7b. The rim height varies between 2.50 and 4.20 cms.
8. There is a great variety of handles. These may be vertical strap handles placed on the upper shoulder (fig. XXX a). They can also be loop or strap, but placed half way up the rim, from where they extend to the upper shoulder (fig. XXX cc, dd and ee). Or they may be very narrow indeed, with a pinched appearance, and extend from rim to shoulder (fig. XXX d, - for a different view of a pinched handle see fig. XXVIII b). Finally, they may be placed horizontally on the upper shoulder (fig. XXX b). The pinched handles are 0.80 cms wide; the vertical strap handles are 2.0 cms wide; but those that extend from the rim are between 1.25 and 1.90 cms in width.
9. The base of all vessels appears to have been rounded.
10. Some vessels received an overall red slip and were then given additional painted and/or modelled decoration. Others were given painted and/or modelled decoration on an unslipped background.
11. The decorative possibilities are as follows:-
 - a) For the rim:-
 - i) Unslipped and undecorated (fig. XXX w, y, bb, cc and dd).
 - ii) A red exterior and a red interior (fig. XXX e).
 - iii) A red exterior and a red interior, with a white band around the neck exterior (fig. XXX a).

11. a) cont.

- iv) A red exterior and a red interior, with white paint spread thickly over the exterior so as to cover the red. It may extend up to 1 cm down the rim interior (fig. XXX h, o and aa).
- v) A white exterior and interior that may or may not be painted over the red. Sometimes the paint is merely daubed over the surface (fig. XXX d, g, i, k - n, p, q, s and x).
- vi) A red exterior and interior, with two moulded snakes, one either side of the rim. These are painted with white blobs to simulate markings, though sometimes these have worn off. There may also be a white band around the neck (fig. XXX c, j, r, v and z).
- vii) A red exterior and a red interior, with the snake painted in white (not illustrated). This is known only from a vessel in the Uhle collections (catalogue number 31974 (2733a)).

b) For the body:-

- i) Unslipped and undecorated. There is a vessel like this in the Uhle collections from a northern location of Pachacamac (catalogue number 32563 (3738)).
- ii) A red slip with a double row of bumps around the upper shoulder on a level with the handles (fig. XXX a).
- iii) A red slip with two moulded snakes, one each side of the vessel and on the upper shoulder at a level with the handles. The snakes are usually painted with white blobs (fig. XXX c)
- iv) A red slip with the snakes in the same position as before, but flanked above and below by a row of

11. b) iv) cont.

bumps (Uhle 1903, p.66, fig. 85).

- v) A red slip with a row of interlocking frets incised on a level with the handles. Beneath this is a row of bumps (Uhle 1903, p.66, fig. 84).
 - vi) A red slip with white vertical panels extending from the white band at the neck. There is such a vessel in the Uhle collections from the northwest part of the town (catalogue number 3196 (2862)).
 - vii) An unslipped vessel with a double row of cane-stamped circles around the upper shoulder, close to the neck (fig. XXX b).
 - viii) Unslipped but with white paint daubed over the surface and a double row of bumps around the upper shoulder (fig. XXX d).
- c) For the handles:-
- i) Unslipped and undecorated. The specimen in the Uhle collections mentioned in 11 b-i has plain horizontal handles placed on the upper shoulder.
 - ii) A red slip with a white band around the base of the handle (fig. XXX a).
 - iii) A red slip with a white band around each end of the handle.
 - iv) A red slip with white bands around the handle (fig. XLVII 1).
 - v) A red slip with no white decoration.

These decorative possibilities are combined in the following ways:- a-i) with b-i) or b-vii) and c-i), that is, an unslipped undecorated vessel with or without cane-stamped circles.

The handles are horizontal (fig. XXX b and Uhle collections

catalogue number 32563 (3838)). a-ii) is combined with b-ii) and c-v), that is, a red-slipped vessel without white decoration, but with the double row of bumps or a row each of frets and bumps (Uhle 1903, p.66, fig. 84). a-iii) is combined with b-ii) and c-ii), that is, the red-slipped vessel with the white band on the neck is found with bumps on the body and a white band around the handle's base (fig. XXX a). a-iv) is combined with b-vi) and c-iii) or c-iv), that is, rims with a thick white slip on the exterior are found with vertical white panels on the body and white bands around the handle (Uhle collections, catalogue number 31926 (2862)). a-v) is combined with b-viii) and small pinched handles (fig. XXX d). a-vi) is found with b-iii) or b-iv) and c-ii) or c-iii), that is, rims with modelled snakes are found with snakes on the body of the vessel, either alone or between rows of bumps. The handles are either horizontal or vertical and have a white band around the base (Uhle 1903, p.66, fig. 85). The only example with a painted snake on the rim (a-vii) has a modelled snake (b-iii) on the body and c-iv) handles, (Uhle collections, catalogue number 31967 (2733 e)). Finally there are the unslipped, undecorated vessels with handles from rim to shoulder (fig. XXX cc, dd and ee).

- 12) Some of the vessels from the Uhle collections and from the valley are charred from base to the handles. This suggests that they were used for cooking food.

B. Relationships

1. There is one example from upvalley from a site near 175.
2. There are many examples from downvalley.
3. From Fundo Pando there is nothing that resembles form VIIA.
The Chancay-type rim of tipo 3 has more connections with form VIIB (Ramos de Cox et al., op. cit., lámina 2, tipo 3, upper drawing). At Maranga the excavations in Huaca I, tomb LVII, yielded a form VIIA vessel with a white band around the rim, white bands around the base of the horizontal handles and the interlocking fret design on the shoulder of the vessel (Jijón y Caamaño, op. cit., p.117, fig. 83).
4. There is nothing similar.
5. There is nothing similar from the mid-Chillón. At Macas figure H is the most similar vessel, but the given rim diameters are slightly wider than the Lurín and Pachacamac specimens (Trimborn 1969, pp.263-264). The Macas vessels are unslipped and undecorated. From the necropolis at Ancón, Reiss and Stübel illustrate a red vessel with a VIIA form and the modelled snake decoration (1880-87, plate 97, fig. 15). Its exact provenience and associations are not given, although Strong gave this vessel a Middle Ancón II date, which would place it in the late MH (Strong 1925, Appendix). In view of its associations in the Lurín I consider such a date to be highly improbable.
6. There is nothing similar.
7. There is nothing similar.
8. In the Virú valley survey and excavations, plain jars with similar rims were found in association with post-MH material. (See Ford and Willey 1949, fig. 9 and general chart for

similar forms and rim profiles in Tomaval and Castillo plain). Collier illustrates three similar Tomaval and Rubia plain vessels, one of which has a row of bumps around the upper shoulder. They are all LIP (Collier 1955, p.47, fig. 19; p.49, fig. 20).

C. Dating

The form is dated as LH on grounds 1 a, b and c. Yet it also goes back to the LIP on grounds 2 a and possibly d. The LH vessels are those decorated with snakes, bumps and snakes, frets and bumps, and white vertical panels on red. Similar decoration has been found on form VA, which has already been dated as LH. All these vessels come from Uhle's Inca period graves in the northwest part of the town (Uhle 1903, chap. 17, pp.64-66). The rim form is also found in the LH strata of Strong and Corbett's excavation, in Patterson's excavation, and also in pits 8 and 9 at Avillay¹. The last three pits all produced only LH or later material. On the other hand, there are several rims from sites without Cuzco-style pottery, such as 105 and 71 (fig. XXX q). These are usually sherds with white paint daubed over the surface. There are also vessels (fig. XXX b and d) which cannot be associated with the Inca occupation of Pachacamac. These have cane-stamped circles or bumps around the upper shoulder and are likely to be LIP. Indications of their earlier dating lie in the handles and decoration. For example, the vessel in fig. XXX d has small pinched handles that have never been found in pure LH excavations. Secondly, fig. XXX cc, dd and ee shows vessels with the handles extending from the shoulder to half way up the rim. In form VC this is an LIP

trait. Thirdly, cane-stamped circles can be more easily associated with the LIP than the LH, for there are no vessels with this decoration from the northwest part of the town. In Uhle's collections there are two vessels with cane-stamping, although the circles are smaller than the ones depicted here. One is an enclosed bowl (catalogue number 27249 (1341)) and the other a face-neck jar (catalogue number 27250 (831)). Both have from two to four rows of circles around the upper shoulder. The former comes from gravefield II and the latter from the oldest part of gravefield I, neither of which can be dated as LH (see Appendix II). There is, however, no cane-stamping on any vessel from the Bandelier collections, and it should be noted that the globular bodies of the forms in fig. XXX b and d are unlike the pear-shaped, flat-bottomed vessels in these collections (cf fig. XLII a-c). Therefore, it is likely that the vessels in question date from the end of the LIP. The vessel in fig. XXX a, that has white on red decoration, bumps but no snake, could belong to either period. Although it is tempting to consider it as LH, it should be noted that bumps are present in the LIP on the North Coast (Collier op. cit., p.49, fig. 20B). Moreover, there is a good case in the Rimac valley for the white on red decoration's being pre-LH, since it can be isolated without accompanying Cuzco pottery in cemetery 2, Huaca 1 at Maranga. In view of these facts, a precise dating for such a vessel is impossible at present.

NOTES

1. Corbett found 67 examples of this rim in Cut 1.

Orange Ware - form VIIIBSample - 19 rimsFigure XXXI bFigure XLIIA. Description

1. This is a very rare form.
2. It is found in all sectors of the study area, although most specimens are from the Huaycán sector.
3. There are fourteen specimens from surface collections and five from the excavation at Panquilma.
4. There are no complete vessels from the study area, but there are 21 from the Bandelier collections from Pachacamac (fig. XLII a - c). These show a vessel with a pear-shaped body, a flat base and a rim shaped like a goblet or cup, that is taller than the rims of VIIA. The strap handles are usually placed at maximum diameter (fig. XLII a - b) or else extend from the upper shoulder to half way up the rim (fig. XLII c). These vessels vary in height from 20.50 cms to 29.20 cms and in rim diameter from 5.75 to 14.10 cms. The vessels are unslipped and undecorated.
5. The rim has the form of a small bowl, either enclosed (figs. XXI b, and XLII e, h, j, l, m, o and p), or open (fig. XLII f, g, i, k and n). The interior rim profile is always concave and the exterior convex.
6. The lip is usually tapered (fig. XXXI b, and fig. XLII e, g, h and j), sometimes rounded (fig. XLII i and n), and sometimes everted (fig. XLII l).
- 7a. In the study area the rim diameter varies between 7 and 16 cms, the majority being from 10 to 12 cms.
- 7b. The rim height varies between 5.30 and 7.50 cms, which is

similar to the rim heights of the Bandelier vessels.

8. The handle width in the Bandelier vessels varies between 1.80 and 3.24 cms. In the valley the only measured handle (fig. XXXI b) is 1.55 cms wide.
9. The Bandelier vessels have a flat base which is from 7.95 to 12 cms in diameter.
10. The Bandelier vessels are unslipped, but three from the valley have white paint daubed over them, and one is slipped red with white decoration.
11. The only decoration consisted of a white band around the lip exterior and crudely painted white diagonal stripes extending downwards from this (fig. XLII i).
12. There is no charring on the Bandelier vessels, or on the valley rims, so that it is likely they were used for storage of liquid or dry food.

B. Relationships

1. There is nothing similar from upvalley.
2. There are a few examples from downvalley, among which should be noted the rim from site 12 (fig. XLII e). There are also a few whole vessels in the Uhle collections. Some of these have incised and punctate decoration. Others are plain. They are said to come from gravefield I (catalogue numbers 26978 (1563) and 26979 (1567)).
3. At Fundo Pando tipo 3 (upper drawing) resembles form VIIB (Ramos de Cox, et. al., op. cit., p.11 and lámina 2). It is abundant there in comparison with other forms, for there are 1772 rim fragments. The authors relate it to the Chancay style and date it as LIP to LH. There are similar forms

from Maranga, although they are decorated. Both come from cemetery 2 of the Huaca 1. One has handles from the shoulder to a point half way up the rim and is decorated with large inverted "V" shapes on a red slip. The other is squatter than the Lurín pots and is decorated with black vertical lines on the unslipped surface (Jijón y Caamaño op. cit., p.133, fig. 97 and p.137, figs. 99-100).

From the cemetery in Huaca 4 comes a pot very similar in shape to fig. XLII c, except that the lower half of the body has a press-moulded design of dots (Jijón y Caamaño op. cit., p.155, fig. 106).

4. There is nothing similar.
5. There is nothing similar from the mid-Chillón, or from Macas. From Ancón there are two vessels similar in shape, though of differing paste and surface treatment. These were excavated by Uhle and one is given a Middle Ancón date by Strong (Strong, 1925, plate 47c). This is a polished red vessel with a design in black and white that is not easily distinguished in the photograph. The second is dated as Late Ancón II and is polished black (Strong 1925, plate 42m). It should be mentioned that there is a similar polished black vessel in the Bandelier collections.
6. There is nothing similar.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LIP on grounds 2 a, b and c. It is found at sites 90, 93 and 31, sites that have no Cuzco-style pottery. Secondly, its abundance in the Bandelier collections confirms an LIP date, as does the fact that it does not appear in any excavation into LH material. It should be noted that the black vessel from Ancón was dated as LIP by Strong in the absence of Cuzco-style pottery from Uhle's excavations (Strong 1925, p.139). A similar vessel is dated as Middle Ancón II by him, which shows that the form has a long history (Strong 1925, p.150).

Orange Ware - form VIIC

Sample - 15 rims

Figure XLIII a - f

A. Description

1. This is a very rare form.
2. It is found in all sectors of the study area.
3. There are eleven specimens from surface collections and four from excavations. Three of the latter are from Pachacamac and one is from layer 10 at Panquilma.
4. There are no complete specimens from the valley. Nevertheless this form with its composite rim is similar to certain Chancay style vessels (Lothrop and Mahler 1957, plate IIId; Strong 1925, plate 42h). There is no indication of the position of the handles on the Lurín sherds.
5. The rim takes the form of an open or slightly enclosed bowl, similar to that of VIIB. At its base there is a small collar or raised band where the rim joins the vessel body.
6. The lip would appear to be rounded (fig. XLIII b), or

slightly tapered (fig. XLIII a and f).

- 7a. The measurable diameters vary between 10 and 12 cms.
- 7b. The measurable rim heights vary between 6.50 and 9.50 cms.
8. The form and size of any handles are unknown. If they are similar to the Chancay-style specimens already cited, they would extend from the neck band onto the upper shoulder.
9. The form of the base is unknown.
10. Some of the Lurín examples have a white exterior slip, and in one case (fig. XLIII g), a red one.
11. There is no known decoration for the Lurín specimens.
12. None of the fragments exhibits any charring.

B. Relationships

1. There is nothing similar from upvalley.
2. There are a few examples from downvalley.
3. Fundo Pando has no similar form. From Maranga, Jijón y Caamaño illustrates a vessel with a similar rim from Huaca 3, but without clear burial associations (Jijón y Caamaño op. cit., p.30, fig. 6). The vessel is decorated in the Chancay Black on White style. Also from Huaca 3 are two pots described but not illustrated. These appear to have similar rim forms to VIIC. One pot is decorated in Chancay Black on White style and the other is a white on red vessel. Both come from tomb CLXXXII (Jijón y Caamaño op. cit., pp.63-64).
4. There is nothing similar.
5. The closest rim form from the mid-Chillón would appear to be Guffroy's form XI, which is found at Santa Rosa de Quives and made from an orange paste (Guffroy op. cit., p.44 and fig. 6c). Although the rim diameter range of 10 to 15 cms

is comparable with that of form VIIC, the proportions are different and the upper part of the rim flares outwards rather than forming an open bowl. There is nothing similar from Macas.

6. There is nothing similar.
7. There is nothing similar.
8. Certain similarities with Chancay-style vessels have already been noted with regard to the rim. On the other hand, the proportions are different because most Chancay rims have a higher collar and a lower, wider cup, although the principle is the same. (See also Kroeber 1926, plate 80c and e; plate 81f and g).

C. Dating

Although the sample is very small, it is possible to reach some conclusions with regard to dating. The finding of similar rims in Huaca 3 at Maranga suggests an LIP date. Since no work has been carried out on the development of the Chancay style, it is impossible to know which forms are LH and which LIP¹. However, the occurrence of a VIIC rim in the Strong and Corbett excavations (fig. XLIII c) suggests that the form lasted into the LH in the Lurín. If it had been common in the latter period, it should have turned up with greater frequency in our collections, particularly in those from sites which were occupied during both periods. Its total absence from the Bandelier and the Uhle collections suggests that it belongs to the latter part of the LIP.

NOTES

1. Kroeber (1926, p.270) made some tentative suggestions as to possible Inca traits in Chancay-style pottery, but they have not been followed up. It is questionable whether such traits as the small modelled animal below the neck, found on Chancay-style pottery, can be attributed to Inca influence since they are found on pre-Inca vessels in the central coast region. See fig. LXXXIX a.

Orange Ware - form VIIISample - 67 rimsFigure XXXI c - uFigure XXXII a - oA. Description

1. This is a less common form.
2. It is found in all sectors of the study area, as well as at Pachacamac.
3. There are 25 specimens from surface collections and 42 from excavations. Of these, four come from Strong and Corbett's Pachacamac excavation, 29 from the Panquilma excavation and nine from the Avillay excavations.
4. There are no complete vessels from the valley, although there are several large sherds (figs. XXXI e and XXXII g). There are, however, complete vessels from Pachacamac (figs. XXI c and XXXII a and b). These fall into two groups which have similar rim forms. The vessels of the first group have the form seen in fig. XXXI c: a globular body with a rounded base and horizontal handles placed above the point of maximum diameter. The rim is similar to that of VIIA, but has a small outward flare at the lip. The vessel is slipped red and decorated with a modelled snake between two rows of bumps. This vessel from Uhle's collection is similar in size to the form VIIA vessel in

- fig. XXX a. A variation of the handles, where these are vertical and extend from the lip to the upper shoulder, is seen in fig. XXXI d. The second group consists of vessels from the Bandelier collections and from Squier's excavation. The Bandelier vessel has a pear-shaped body and a rim similar to the Uhle vessel's, but more evenly proportioned, in that both the bowl and the flare are of equal height. The Squier vessel has a squat, lenticular body with a similar rim. The handles are of the loop type and are placed at maximum diameter. The Bandelier vessel has longer handles that extend from the bowl part of the rim to the upper shoulder. The height of the Squier vessel is 19.50 cms and the rim diameter is 14.10 cms. The Bandelier vessel is 18.50 cms high and has a rim diameter of 11.20 cms.
5. The rim has a composite silhouette as described above. In the LH version, the flare is of less height than the cup (fig. XXXI). In the earlier version it is of a similar height to the cup (fig. XXXII c - e), or at least from a third to a half of the height of the cup (fig. XXXII f - o). Three of the latter rims are slightly different (fig. XXXII g - i). Here the diameter of the lip is less than the diameter of the neck and the flare is less marked.
 6. The lip is usually rounded (figs. XXI d - f, i, j, l, m, p - r and XXXII c - f, j - l). On rare occasions it is flattened (figs. XXXI h, o and XXXII m and n), and sometimes it is tapered (figs. XXXI g, k and s, and XXXII h and j).
 - 7a. The rim diameter varies between 8 and 18 cms. These limits occur once only, for the majority of rims fall between

10 and 14 cms.

- 7b. The rim height varies between 2.90 and 5 cms.
8. As mentioned previously, there is a certain amount of variation in handle form and placement. The later vessels either have a horizontally-placed handle (fig. XXI c and e), or else a vertical one that extends from the lip (fig. XXXI d). The earlier version has small loop handles placed at maximum diameter or from half way up the rim to the shoulder (fig. XXXII b, h and i), or else a small horizontal handle placed on the upper shoulder (fig. XXXII g). The handle width of the earlier version varies between 0.90 and 1.85 cms.
9. The base is always rounded.
10. The Squier vessel is slipped white and the Bandelier vessel is unslipped. The Uhle vessel is slipped red. The sherds from the study area are either red-slipped (fig. XXXI e, g, h, i, k, m, o - q, s and t), plain (figs. XXI j and XXXII d, f, g, i and j), or daubed or painted in white (figs. XXXI l, n, r, and XXXII c, e, h, m - o).
11. The decorative possibilities for this form are as follows:-
 - a) for the rim:-
 - i) Unslipped and undecorated (figs. XXXI j and XXXII d, f, g, i and j).
 - ii) A red exterior and a red interior (figs. XXXI c and XXXII k).
 - iii) A red exterior and a red interior, with a white band at the neck exterior (fig. XXXI o).
 - iv) A red exterior, a red interior, a white band at the neck exterior and a white band around the lip interior, which extends slightly onto the exterior (fig. XXI g, h, i and t).

11. a) cont.

- v) A white exterior with thick white paint applied over red (fig. XXXI e).
 - vi) A red exterior, a red interior, a white band at the neck and a snake modelled on the rim (fig. XXXI k and s).
 - vii) White paint daubed over the exterior, sometimes over a red slip. On occasions the white extends into the interior as a band (figs. XXXI l, m, n, q, r, and XXXII c, e, h, l, m - o).
- b) for the body:-
- i) Unslipped and undecorated (fig. XXXII a).
 - ii) All white (fig. XXXII b).
 - iii) Red with a modelled snake on the upper shoulder (one on either side of the jar) and a row of bumps above and below (fig. XXXI c).
 - iv) Red with white vertical panels (fig. XXXI e).
 - v) Red with white circles (fig. XXXII o).
 - vi) Red with modelled snakes decorated with white blobs. (This is found on an unillustrated jar in the Uhle collections, catalogue number 31968 (2733 f)).
 - vii) Red with an impressed decoration, probably similar to the frets on form VIIA. An example comes from Maranga (Jijón y Caamaño, op. cit., p.119, fig. 87). In spite of the poor photograph, it is possible to distinguish the kind of decoration, which is included for this form because it is found at Pachacamac (Uhle op. cit., p.66, fig. 84).

11. cont.

c) for the handles:-

- i) Unslipped and undecorated (fig. XXXII a, g and i).
- ii) All white (fig. XXXII b and h).
- iii) Red with a white band around the base of the handle, which is painted with white stripes. This decoration is found on the Maranga vessel already mentioned. Given the fact that it is found on form VA and VIIA vessels, it is likely to occur on form VIII as well. The handles on fig. XXXI c may have been decorated in this manner, but the vessel is so blackened it is impossible to tell.

With regard to combinations of these features, the unslipped undecorated rim is found with the same body and handles, always of the loop type and in one case horizontal. The thickly painted white rim is found with the white panels on the body and the white-daubed rim is found with a white-daubed body or else white circles. The red rims with a white band at the neck are found with snakes, snakes and bumps and possibly frets on the body of the vessels. It is also interesting that sometimes the snake is found on the vessel body without a corresponding snake on the rim. The handles in the latter jars are usually horizontal but it should be noted that the handles on the jar from Maranga are vertical and similarly placed to those of form VIIA in fig. XXX a.

- 12. The charring on the vessel in fig. XXXI c suggests that some vessels were used over a fire.

B. Relationships

1. There are no examples from upvalley.
2. There are some examples from downvalley.
3. From Fundo Pando the most similar types are Tipo 3, lower drawing, and Tipo 7, middle drawing (Ramos de Cox et al., op. cit., lámina 2). The former falls into their Chancay category and looks taller than the rims discussed here.

Since no paste characteristics or dimensions are given it is impossible to make further comparisons. The vessel from Maranga has already been mentioned. It was found in cemetery number 1 of Huaca I, from which Cuzco-style and Cuzco-associated vessels come (Jijón y Caamaño op. cit., pp. 105-124).
4. There is nothing similar.
5. Guffroy's form XI has already been mentioned in connection with form VIIC. It is similar to form VIII as regards the position of the handles, which are vertical and extend from the bowl of the rim to the upper shoulder. In this it resembles fig. XXXII a. The rim diameter of 10 to 15 cms and the rim height of 3 to 7 cms also correspond well to the measurements for form VIII. There are also decorated vessels from Ancón that have a similar rim form to that of the Bandelier and Squier vessels in fig. XXXII a and b. Strong illustrates three in red and white and red, black and white (Strong op. cit., plate 44 a, d, m). However, the vessel body differs from the Lurín examples in having a corner point at mid-height. Of further interest is the similarity between the rims of fig. XXXII g, h and i and those of certain decorated vessels also illustrated by Strong (op. cit., plate 44 k; plate 45 a). They are all dated as Middle Ancón II.

6. There is nothing similar.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The composite rim consisting of bowl plus flare has a long history on the central coast, since Menzel dates the vessel illustrated in plate 44 d of Strong's monograph as MH 4 (Menzel 1977, fig. 113A and p.47). It is also obvious from the differing body shapes and decoration of form VIII that it belongs in more than one period. From the previous discussion of forms VA and VIIA, it is possible to suggest that all forms with the snake, snake and bumps, and the white vertical panels are LH. Such decorative features are not found at sites that have no Cuzco-style sherds. Furthermore, the rims of such vessels have different proportions from those of earlier vessels (cf. fig. XXXI d - v and fig. XXXII c - o). The Bandelier and Squier vessels are LIP, as are such features as white-slipped rims, handles that extend from half way up the rim to the shoulder and rims with a pronounced flare. Since other vessels in the Bandelier collections do date back to the late MH (see Appendix II), it is possible that some of the form VIII rims also date back that far, although one would expect the body of such a vessel to have a corner point, as at Ancón. In this connection it is worthwhile noting that at Pachacamac there is a small vessel with a flaring rim and a corner point on its body (catalogue number 2746 (1024 f)). Uhle's accompanying note states that it comes from the oldest part of gravefield I.

Orange Ware - form IXSample - 76 rimsFigure XXXII p - x
Figure XXXIII a - vA. Description

1. This is a less common form.
2. It is found in all sectors of the study area as well as at Pachacamac.
3. There are 37 rims from surface collections and 39 rims from excavations. Of the latter, four come from Patterson's excavation at Pachacamac, seven from Strong and Corbett's, 22 from the excavation at Panquilma and six from Avillay.
4. There is one complete vessel from the study area from Panquilma. It is 19 cms in height and has a rim diameter of 13 cms. The body of the vessel is pear-shaped and the rim curves outwards to end in a thickened, bevelled lip. There is a design in white around the upper shoulder. There is also a complete but unmeasured vessel from the Uhle collections (catalogue number 31972). It has a globular body and, like the Panquilma examples, small horizontal handles placed just above maximum diameter. However, it is decorated in a different manner, since a modelled snake is found on the shoulder.
5. The rim profile is straight to convex on the interior and straight to concave on the exterior, although a few rims do show a slightly convex exterior (fig. XXXIII f and g). Both interior and exterior angles at the neck are obtuse, or rarely a right angle, and in some cases there is no corner point on the neck exterior (fig. XXXII q, r, s, u and x, and fig. XXXIII l, r and t).

6. The lip is thickened, extensively in one case (fig. XXXIII a), and given an exterior bevel. In most cases there is a slight overhang (figs. XXXII q - u, w, and XXXIII a - n, u - v). In the other cases the lip is merely thickened. The bevel can be slightly rounded (figs. XXXII q - s, w, x, and XXXIII e, f, h, i, l - n, r, s), or flat (figs. XXXII u, v, and XXXIII a - d, g, j, i, o - q, t, u). It will be noticed that there is a similarity between these profiles and those of Dark Brown Ware form III (cf. fig. XVII), but the paste, surface treatment and proportions are different.
- 7a. The rim diameter varies between 8 and 20 cms, both these being unique measurements, for the majority of rims fall between 10 and 14 cms.
- 7b. The rim height varies between 2 and 5 cms.
8. No handles have been found associated with the rim sherds. On the complete vessel there are two small horizontal handles set close to the neck on the upper shoulder. They are 1.20 cms wide.
9. The base of the complete vessel is pointed. That of the vessel from the Uhle collections is rounded.
10. The vessels are unslipped and undecorated, or unslipped with a white decoration, or red slipped.
11. The decorative possibilities are as follows:-
 - a) for the rim:-
 - i) Unslipped with a white band on the lip (fig. XXXII p and t).
 - ii) An all white exterior (fig. XXXII v).

11. a) cont.

- iii) A red exterior and interior (figs. XXXII s and XXXIII b, g, k, n, o and q).
- iv) A red exterior and interior, with white daubed or thinly spread over it (figs. XXXII q, w, x, and XXXIII a, c, h, l, p, r, s, u).
- v) A red exterior and interior, with a white band on the lip (figs. XXXII u and XXXIII d).
- vi) The same as v) with a white band around the neck, (figs. XXXII r and XXXIII m).
- vii) A red exterior and interior, with a white band at the neck (fig. XXXIII j).
- b) for the body:-
 - i) White semi-circles placed in three rows around the upper shoulder (fig. XXXII p).
 - ii) Slipped or unslipped with a modelled snake on the upper shoulder (fig. XXXIII r - t). In the vessel from the Uhle collections the head of the snake is exaggerated.
- c) for the handles:-
 - i) White daubed over them (fig. XXXII p).

Our knowledge of possible combinations of features is frustrated by the lack of complete vessels. For the present, the white band around the lip on an unslipped surface and white-daubed rims are probably associated with designs similar to the semi-circles in fig. XXXII p, as well as with the snake design in fig. XXXIII r and s. The red-slipped rims with white bands around the neck and lip may have had the snake design on the shoulder, or else something akin to the vertical white panels of forms VA and VIIA (fig. XXV b).

12. The base of the vessel illustrated here is slightly charred, indicating that some pots were used over fires.

B. Relationships

1. There is one example from upvalley.
2. There are many examples from downvalley.
3. Ramos de Cox depicts a similar rim form from Fundo Pando in her tipo 4, upper two drawings (Ramos de Cox et al., op. cit., lámina 2). There is no information on its frequency in the excavations there. From Maranga, Jijón y Caamaño illustrates a very similar form to the one in the Uhle collections from Pachacamac. It comes from cemetery 1 of Huaca I and surprisingly is referred to as a black pot (Jijón y Caamaño, op. cit., p.115, fig. 82). It is just possible that the vessel was so charred that it was mistaken for Black Ware.
4. There is nothing similar.
5. In the mid-Chillón there is a similar rim form illustrated by Guffroy (op. cit., fig. 6a). Its diameter is given as 15 cms. On the other hand, he does not specify the paste for this form. Since the majority of sherds from this site, Pucara 1, are Brown Ware (Guffroy op. cit., p.29) this rim may resemble Dark Brown Ware form II rather than Orange Ware form IX.
6. At Chilca there is one rim profile that can be related to form IX (Bonavía op. cit., plate VII, fig. 26). From Bonavía's description, the paste resembles that of Lurín Orange Ware, for the colour varies between brown and brick red and the surface is unburnished (Bonavía op. cit., p.160). Furthermore, the profile is classified among the undecorated rims.

7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LH on grounds 1 a and c, and also as LIP on ground 2 a, for it is found at sites 175 and 109. The fact that some sherds are decorated with the snake design and that a form IX vessel with a snake is found in the LH cemetery at Maranga, and in Strong and Corbett's excavations, provides strong support for its being an LH form for the most part. On the other hand, the pointed base of the vessel illustrated and the narrow horizontal handles so close to the neck are not characteristic features of the LH¹. There is, however, a resemblance between the above vessel and the large storage jars in fig. XXII a and b, one of which also has a similar rim. Neither of these vessels has Inca associations, for the typical coastal Inca storage jar is decorated with white vertical panels on a red background (see form XVI, fig. XLVIII, also Uhle, op. cit., p.63, fig. 66). Therefore the vessel illustrated is probably LIP. At the same time, since the rim is not found in the Bandelier collections it is likely to date towards the end of that period.

NOTES

1. There are over 20 Orange Ware vessels decorated in white on red in the Uhle collections. These are from Inca or Inca associated graves. Most forms have already been described (see forms I, VA, VIIA, VIII). They all have a globular body.

Orange Ware - form XSample - 46 rims

Figure XXXIII w - x
Figures XXXIV -
XXXVIII
Figure XXXIX a - c

A. Description

1. This is a rare form. It includes several varieties of face-neck jar, some of which are illustrated for the purposes of comparison rather than because they are found in the study area.
2. It is found in all sectors and at Pachacamac.
3. There are 29 rims from surface collections and seventeen from excavations. Of these, four come from Patterson's excavation, five from Strong and Corbett's, and eight from Panquilma.
4. Complete vessels are illustrated in fig. XXXIII w and x. They are both from Pachacamac from the northeast part of the site near the pueblo joven. Fig. XXXIII w shows an ovoid vessel with a pointed base and vertical handles set at maximum diameter. A face is painted and modelled on the rim and arms and hands are painted on the upper shoulder on one side. On the other side is a painted design that may depict hair. The vessel illustrated here is approximately 40 cms high, with a rim diameter of 16 cms. A similar vessel and two variant forms are illustrated in Uhle (op. cit., plate 13, nos. 5, 6, 7). The second vessel, fig. XXXIII x, is smaller, about 20 cms high, with a rim diameter of about 7 cms. The body is globular with a rounded base. There is a single handle that extends from half way up the rim onto the upper shoulder. It is placed on the opposite side of the rim from the face, which is modelled and painted as in the previous example. The hands and arms are incised on

the upper shoulder.

5. The rim is tall. It flares gently upwards and outwards to form an open bowl. The interior profile is usually concave and the exterior convex (figs. XXXIV b, d, e, f, h, and XXXV a - c), but on occasions the profile is almost straight (fig. XXIV a), or with a convex interior and a concave exterior (figs. XXXIV c and XXXV d). The ear plugs and ears were modelled and attached separately (fig. XXXIV b and c). The interior neck angle varies from a right angle to an obtuse angle.
6. There are three kinds of treatment for the lip. It can be rounded (figs. XXXIV a - e, h; XXXV b, d; and XXXVI d), flattened (fig. XXXV a, b), or slightly everted (fig. XXXVI b, e, f). A few examples are everted in a manner similar to that of form XI (fig. XL 1 - n). In this case the lip is flattened and thickened on the exterior. An example comes from Patterson's excavation at Pachacamac.
- 7a. The rim diameter varies between 4 and 17 cms, but the former is a unique measurement found on the unusual rim illustrated in fig. XXXV d. The majority of rims fall between 10 and 16 cms for the larger jars illustrated in fig. XXXIII w. The few rims from 6 to 7 cms in diameter come from the smaller jars illustrated in fig. XXXIII x.
- 7b. The rim height varies between 6.60 and 10.60 cms.
8. On the larger jars there were vertical strap handles, as in fig. XXXIII w. At the moment none have been found associated with a body sherd from a face-neck jar, but the largest Orange Ware handles are from 2.40 to 3.80 cms. wide. The width of the single strap handle on the small jar in fig. XXXVI c is 1.25 cms.

9. The bases were rounded or pointed, as discussed previously.
10. Most vessels were given an overall red slip and then decorated in white and black, but some were unslipped and occasionally lightly burnished (figs. XXXV d, and XXXVI d).
11. The decoration is standardised for most jars and may be summarised as follows:-

a) for the rim:-

- i) The nose. This is modelled from the clay of the rim itself (fig. XXXVI e), or modelled separately and stuck to the face (figs. XXXV f, and XXXVI a, c, and XXXVII f). It is usually left red, although in fig. XXXVI e it is painted white over the red slip. It may also be outlined by a black circle (fig. XXXIV a).
- ii) The eyes. These can be round (fig. XXXIV a) or almond-shaped (fig. XXXIV d, f and g). They are formed by pushing the clay outwards from the rim interior so that a slight bump is formed on the exterior surface. They need not be given any additional embellishment (figs. XXXV f; XXXVI c, and XXXVII c), but some have further incisions to separate the pupil from the iris (fig. XXXVI a and d). In fig. XXXV e the eye itself is modelled separately and stuck onto the rim. In other examples the eye was painted white and outlined in black, with a black dot or dash for the pupil and a black eyebrow.
- iii) The ears. These were modelled separately and stuck to the face. They are undecorated (figs. XXXIV a, e; XXXV d; XXXVI b, f, g; and XXXVII a).

11. a) iii) cont.

Fig. XXXVII e shows a modelled ear with an earplug pendant from it. Although the surface of the earplug is worn, it was apparently painted white with a row of black dots around the circumference. Sometimes the vessel has earplugs instead of ears. These are always round and sometimes plain (fig. XXXIV c and fig. XXXV c). Others are white with a double black cross (fig. XXXVII f); white with black horizontal stripes (fig. XXXV a); white with black horizontal and vertical stripes (fig. XXXIV b); white with red horizontal stripes (fig. XXXVII d); and white with a worn black design (fig. XXXVIII d).

- iv) The mouth. This can be absent (fig. XXXVI c); a groove (fig. XXXVI e); indicated by a white stripe (fig. XXXV f); or indicated by a slight bump at the neck (fig. XXXVI e).
- v) Facial decoration. One face has what appears to be a black inverted triangle above the nose (fig. XXXV f). Other faces have black lines around, or stemming from, the eye (fig. XXXVI f, g).

It should be noted that the faces in figs. XXXVII a and XXXVIII a are unusual. In the first place, they both have a slight burnish. The former has a modelled, appliqué eye with incisions and may come from a bowl rather than a jar. The latter has a modelled, closed eye and is part of a jar body rather than a collar, judging from the rough interior.

b) for the body:-

- i) The arms. An examination of complete vessels from Pachacamac shows that most face-neck jars must have had arms and hands indicated on the body of the vessel.

11. b) i) cont.

These may be painted white and outlined in black. They extend downwards from the upper shoulder of the vessel, with the elbows bent and the hands almost meeting in the centre of the vessel at approximately maximum diameter (fig. XXXIII w and x). They usually show some kind of decoration across the back of the hand. This can be black hatching on white (fig. XXXIII w); a small white circle outlined in black with a black dot in the centre (Uhle 1903, plate 13 no. 5); or the Cuzco lattice A design (Rowe 1944, p.47) in black on white (Uhle 1903, plate 13 no. 6). Some of the hands on sherds from the study area have no design (fig. XXXVII g and h), and others are stylised (fig. XXXVIII h). If not painted black, the outline of the arms and hands is incised (figs. XXXIII x and XXXVII k). On other sherds from the valley the arm is modelled as well as being painted white and further decorated in black. This decoration takes the form of a stylised fish (figs. XXXIII w; XXXVI f; XXXVII b; and XXXVIII g). In one case (fig. XXXVIII b), the arms are modelled like small ears (cf. Uhle 1903, plate 13 no. 3).

- ii) The necklace. There is usually a white band around the neck constriction (figs. XXXIII w; XXXIV a, f; XXXV a, d, e and f). These may extend on to the upper shoulder in certain cases, probably in imitation of a necklace. Fig. XXXIII x shows a white necklace outlined with black stripes and filled with black vertical stripes. In fig. XXXVIII d there is a white

11. b) ii) cont.

laurel-leaf shape between the earplugs and this is filled with black-outlined rectangles with a black dash inside.

- iii) Other elements. One of the face-neck jars from Pachacamac has on its body three hollow white circles which are outlined in black (Uhle 1903, plate 13 no.7). Such circles are found on sherds from the study area (fig. XXXVIII e), as well as being solid (fig. XXXVII i) or filled with black lines (fig. XXXVIII f). Another design on the vessel body is a horizontal or vertical band outlined with black and filled with black and white hatching (figs. XXXVII j and XXXVIII c). The sherds should be compared with face neck jars from Uhle's collections with similar design elements (Uhle 1903, plate 7 no. 4).

c) for the handles and other appendages:-

- i) The jar in fig. XXXIII w has a white band around the entire handle base. Such handles have been found within the study area (fig. XLVII l), but none as yet are attached to body sherds from a face neck jar.
- ii) The jar illustrated in fig. XXXIII x has white bands painted around the handle itself, a feature of many unattached Orange Ware handles in the valley.
- iii) Certain jars had appendages in the shape of a human head on the vessel body. One is illustrated in fig. XXXVIII i. The features are all crudely modelled with the eyes painted black and white, and there is a white band extending from forehead to chin. This is probably a headdress. The face should be compared with the smiling face in Uhle's illustration (Uhle

11. c) iii) cont.

op. cit., plate 13, fig. 5), for both appear to be the same person.

12. No jar exhibits a charred base and they are likely to have been used for the storing of ceremonial liquids, such as chicha, or purely as grave vessels. The former hypothesis is given support by statement in Avila that:-

"Uncuraya se llama el jarro con la figura del demonio, usábase de él en la fiesta de massuma." (Avila 1966, p.199).

It is possible that the face represents one of the gods of the coastal pantheon. The face-neck jar belongs to a tradition going back to MH 2B (Menzel 1964, p.56). It is not found in the preceding Nieveria style (Gayton 1927). The earliest ones have no arms depicted on them. Instead on the vessel body are mythical feline figures which become more stylised (fig. XXXIX a and cf. Lyon 1966, plate VI). A later version (fig. XXXIX b) again lacks the arms, but has facial features and a rim form very similar to the ones under discussion here. If these vessels are all manifestations of the same deity, i.e. a creator god whom the Incas called Pachacamac, his attributes have changed over the years from feline to piscine. Or else the vessels represent different deities according to the particular attributes pictured. It is tempting to see the jars discussed here as manifestations of Pachacamac, but it would also be possible to make a case for their representing the god Cuniraya, who in the Avila legend was responsible for stocking the sea with fishes, (Avila 1966, pp.27-29).

B. Relationships

1. There is one example of a rim sherd from a face-neck jar upvalley, but the rim diameter is only 4 cms, so that it belongs to a different group.
2. There are some examples from downvalley sites. The majority of rims are similar to the ones illustrated here, but a few resemble the bottle-neck rim upvalley. One rim sherd comes from a jar similar to that of fig. XXXVIII k.
3. There is no mention of face-neck jars in the collection from Fundo Pando. There are a few from Maranga, but none resembles the jars under discussion here¹.
4. Patterson (personal communication 1979) stated that there are sherds of face-neck jars of the kind under discussion here at a site on the south side of the Rimac valley at the confluence between the Rimac and Santa Eulalia rivers. This may be part of ancient Mama where the wife of Pachacamac had a shrine (Uhle, op. cit., Chap.15, p.51).
5. There is no mention of face-neck jars from the mid-Chillón or from Macas. They are present at Ancón, but in Middle Ancón graves not in the late ones, and their resemblance is to the MH jars of the Pachacamac style that have already been mentioned (Strong 1925, plate 46 f, h, j, l, n; plate 45 i. Menzel 1977, p.46 gives f, h, and j an MH 2B date).
6. There are similar jars from Chilca (Bonavía op. cit., plate I; plate II nos. 12 - 15; also p.138). Bonavía states that 72 out of his 645 fragments come from these jars. He gives a rim diameter that varies between 15 and 23 cms, which is a little larger in range than the Lurín specimens. The paste is a red colour and the vessel was given a red slip, the features

of the face being either modelled (ears and nose), incised (mouth), or painted (eyes). The eyes are painted black and white, as in the Lurín examples. There is no mention of earplugs and it is assumed that each face was only given ears. The rim profile is very similar, although all the examples drawn show the flattened, everted lip. He dates them as LIP (Bonavía op. cit., pp.166-167). There is no mention of what the body of the vessel was like.

7. There is nothing similar.
8. Face-neck jars are well known from other areas. The nearest area to the mid-central coast is the Chancay valley to the north, and such jars abound in the Black-on-White style (Kroeber 1926, plates 80 b, 81 e, 82 a). They are usually assigned to the LIP. At present there is no MH face-neck jar at Chancay, as there is at Supe to the north (Kroeber, op. cit., p.274)². The late face-neck jars from Supe, however, are Black Ware and/or Inca-associated (Kroeber, 1925, plate 70 h, 1). South of the Lurín face-neck jars similar to the ones discussed here are found in late assemblages from Mala, Cañete, Chincha and Ica³. The latter finds were excavated by Uhle and first illustrated by Kroeber and Strong (1924, plates 12 c, d; 34 c). Menzel dates all these finds as LIP 8 to the beginning of the LH⁴. Both the Chincha jars have tall, flaring rims, but one of them has a different body contour. Their facial features are more crudely modelled than those of their Lurín counterparts and they have ears, but no earplugs. Furthermore the decoration on the vessel body is dissimilar⁵. The Ica jar is considered by Menzel to have imitation Chincha features. The rim and

facial features bear a general resemblance to the Lurín specimens, but again the decoration on the jar body is different. It is interesting that she does not relate the jar to any central coast prototype, but considers it an imitation of Chincha face-neck jars⁶.

C. Dating

This form is dated as LH on grounds 1 a and c, but as originating in the LIP on grounds 2 a, and others to be discussed below. The finding of this form in Strong and Corbett's excavations, as well as Uhle's in LH graves at the northwest of the site, leaves no doubt that it flourished during the LH. In addition, the lattice A design across the back of the hands of the specimen illustrated by Uhle (op. cit., plate 13 no. 6) suggests that certain features of the Cuzco style were blended into coastal pottery. On the other hand, the fact that two rims from the study area were found at sites with no Cuzco-style or Inca-associated pottery suggests that the form dates back to the latter part of the LIP. In this connection it is interesting that Menzel dates the jars from Chincha and Ica to this point in time. Bonavía gives a similar date for the Chilca examples, as does Bueno⁷. The face-neck jars of the Bandelier collections are different from the ones under discussion (figs. XXXVIII k and XXXIX a - c). Among them, the jar in fig. XXXIX b most resembles the later ones in spite of the fact that it has no handles or body decoration and the facial features are executed by incision and punctation. Jars b and k of figs. XXXIX and XXXVIII would seem to be the forerunners of the painted Ichimay ones; there is no evidence of the two kinds' being associated in any grave lot. Finally, the smaller jars with the single handle, as illustrated

in figs. XXXIII x and XXXVI c, are all LH, since Uhle clearly finds them associated with Inca materials at Pachacamac (Uhle op. cit., pp.62-66). Their single handle and squat proportions are features found on other Inca-associated vessels, both black and red (Uhle op. cit., plate 13, nos. 2, 3, 10, 15; p.64 fig. 73).

NOTES

1. Jijón y Caamaño op. cit., p.80 fig. 53, illustrates a face-neck jar with a large white zigzag line running around the middle of the vessel. He finds Inca influence in this vessel, but it comes from Huaca 3, cemetery 4, where there are no LH or Inca-associated vessels, unlike Huaca 1, cemetery 1. On p. 138, fig. 101, is another face-neck jar with a single strap handle extending from rim to shoulder behind the face. Cemetery 2 in this Huaca is discussed in Appendix II of this thesis. It contains no LH vessels and, from the shapes of the vessels and their decoration, dates to the LIP.
2. The face-neck jars from Supe were excavated by Uhle and first illustrated by Kroeber (1925, plate 72 a - b, f - h). Menzel (1977, p.35) dates one of these jars, and by implication the rest in that plate, as MH 3. The late jars in plate 70 are all LH from their associations.
3. Bueno (1979 p.14) in his discussion of the spread of the face-neck jar, which he considers the hallmark of his Ichimay style, mentions the fact that similar jars have been found at the valley mouths of these two rivers. He believes the spread of these jars to be due to the diffusion of the worship of the Lurín valley god, i.e. Pachacamac.
4. Menzel (1966, plate 9, figs. 1 and 7) illustrates two jars from Chíncha. The shape and decoration of these jars is better seen in the Kroeber and Strong photographs mentioned in the text.
5. The Chíncha jar with handles has large red triangles extending from the neck to the point of maximum body diameter. These are painted on a white background. The other jar with the hands raised to the face, reminiscent of the Uhle one (1903 plate 13, no. 7), has a rhomboid formation of stepped crosses in red on white.
6. She does not mention the decoration on this particular jar in her study. The Kroeber and Strong photograph is partly blurred, but the design seems typically Ica.
7. Bonavía, 1958, p.166. Bueno, 1979, p.14. Also Bueno (1978b, p.68) illustrates a large rim sherd from a face-neck jar similar to the ones discussed here. He reiterates the fact

that it is the most characteristic form of the Ichimay style which was prevalent in the kingdom of Ichimay, i.e. the lower Lurín valley, from 1200 - 1470. He makes no mention of the fact that the style continued into the LH.

Orange Ware - form XI

Sample - 133 rims¹

Figure XXXIX d - o

Figure XL a - s

Figure XLI a - c

A. Description

1. This is a common form with three variants.
2. It is found in all sectors of the study area as well as at Pachacamac.
3. There are 58 examples from surface collections and 75 from excavations. Of the latter, 35 come from Pachacamac: three from Patterson's excavation and 32 from Strong and Corbett's. 38 come from the Panquilma excavation and two from the Avillay excavations, one each from pits 10 and 11.
4. An almost complete specimen (fig. XL a) was found on a hill slope near the modern village of Chontay. It was probably dropped by a huaquero. This vessel had a globular body, a high flaring rim and a slightly everted lip. It was slipped red with a white band around the neck and on one side of the upper shoulder were three solid white circles, 7 cms in diameter, each outlined with a black stripe. There were apparently no handles. The rim diameter was 15 cms and the vessel was over 30 cms high.
5. The rim flares upwards and outwards from what is usually a right angle, or just over a right angle, at the neck interior (fig. XXXIX e, g, l, m). The interior profile is usually

concave and the exterior convex when the lip is rounded or flat (fig. XXXIX d - h, j, k, n, o). When the lip is everted and tapered or flattened, the interior profile is straight or slightly convex, and the exterior straight or slightly concave (figs. XL a - g, i - s; XLI a - c).

6. There is a variety of lip form. The lip can be flattened with a slight interior bevel (fig. XXXIX d - i); rounded (fig. XXXIX j - o); or everted (fig. XL). The latter category can be subdivided into those lips which curve out from the rim without a sharp demarcation line, much as the rim of an aryballus, and with a rounded lip (fig. XL a - d, g); and those lips with a sharp line of demarcation from the rim. These can be either rounded (figs. XL e, f, h - o, q; XLI b, c); or flattened (figs. XL p, r, s; XLI a). It should be remembered that face-neck jars show a similar variation in lip form.
- 7a. The rim diameter varies between 8 and 20 cms, but the majority fall between 14 and 16 cms.
- 7b. The height of the rim varies between 5 and 11.50 cms.
8. There were no handles associated with the nearly complete vessel. It is possible that some had vertical handles placed at maximum diameter, for in most collections there are large vertical handles unassociated with rims and from 3.50 to 4.50 cms wide. On some specimens, however, there are vertical strap handles extending from half way up the rim onto the shoulder (fig. XXXIX l; fig. XL j). These rims, may belong to a different jar form from the one illustrated in fig. XL a, but at present there is no indication as to the shape of the vessel body.

9. The base of these jars was probably rounded.
10. The majority were slipped red with decoration in white and possibly black.
11. The decorative possibilities are as follows:-
 - a) for the rim:-
 - i) A red exterior and a red interior (figs. XXXIX f, l, n; XL e - i, k, m, p, s; and XLI c).
 - ii) A red exterior and a red interior, with a white band around the lip (figs. XXXIX g, j; XL b, c, r, - in these latter cases the band is around the lip interior and not the exterior).
 - iii) A red exterior and a red interior, with a white band around the neck (figs. XXXIX e, m; XL a, d, j).
 - iv) A red exterior and a red interior, with white bands around both the lip and the neck (figs. XXXIX h; XL n, o).
 - v) A white exterior and an unslipped interior (figs. XXXIX k; XLI a).
 - vi) A white exterior and a white interior (figs. XXXIX d, l; XL l).
 - vii) A white exterior and an unslipped interior, with a white band around the lip interior (fig. XL q).
 - b) for the body:-
 - i) Red exterior with solid white circles outlined in black (fig. XL a).
 - ii) There were probably other forms of decoration which at present it is impossible to associate with this rim form (figs. LII f, h, i; LIII; LIV; and LV).
The sherds in these figures show various painted

11. b) ii) cont.

and/or modelled decoration. Some of them are probably part of form X vessels. Many cannot be associated with forms I to IX or XIII to XVI on the basis of our present knowledge of such forms. Since there are few unclassified rims, such unassociated decorated body sherds may well come from a form XI vessel.

c) for the handle:-

At present there is no information. They are unlikely to be different from the ones described for forms VA and VIIA.

12. The size of the vessels and the fact that there is no evidence of charring suggest that they were used for storage.

B. Relationships

1. There are no similar forms from upvalley.
2. There are some similar forms from downvalley.
3. None of the rim forms drawn for Fundo Pando in the Rimac valley resembles the ones illustrated here, with the possible exceptions of tipo 8 (uppermost drawing) and tipo 10 (lower drawing), (Ramos de Cox et al., op. cit., lámina 2). There is nothing similar from Maranga.
4. There is nothing similar.
5. There is nothing similar.
6. Bonavía illustrates rim forms that have some similarity to form XI (Bonavía op. cit., lámina VI; VII nos. 28, 29). He also notes that the rim illustrated in lámina VI no. 30 is the same kind that one finds on face-neck jars (Bonavía, op. cit., p.158).

7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LH on grounds 1 a and 1 c. On the other hand, the fact that it is found at sites without Cuzco pottery such as 177, 71, and 90 (fig. XL b and s) suggests that it has its origins in the LIP. The only vessel from the Bandelier collections with a large flaring rim is illustrated in fig. XLI d. This form has a partially flattened base and a single handle on the opposite side from a small protuberance which may be a stylised nose. The vessel is unslipped and there is no white paint. This dates to some part of the LIP (see Appendix II), but at present there are no sherds of this form in the collections from the study area. Nor is there anything in the Bandelier collections, or from Uhle's excavations, that resembles form XI as described here. If it does go back as far as the LIP, it is probably only the last part of that period.

NOTES

1. Although every effort has been made to separate the two categories, it is possible that some form X rim sherds have been classified with the form XI. This is because of the similar size and shape of the rims from the two forms. If there is no decoration on the back of the rim of a face-neck jar, it is impossible to tell them apart, unless the sherds in question are from the same rim.

Orange Ware - form XIISample - 20 rimsFigure XLI e - nA. Description

1. This is a very rare form.
2. Its distribution is spotty, since it is found at two major sites upvalley (164 and 137), two in the middle of the study area (96 and 84), and two downvalley in the study area (57 and 35).
3. There are eighteen examples from surface collections and two from excavations: one each from Panquilma and Avillay, pit 11. It is surprising that there are no specimens from Pachacamac.
4. There are no whole vessels, but a general similarity in rim profile and rim decoration to forms X and XI suggests that the body may have been globular or ovoid and the height from 30 to 40 cms.
5. The rim flares outwards from an interior neck angle of just over 90° . The exterior profile is generally concave and the interior convex. Its outstanding feature is a small flange on the exterior, placed between 1 and 2 cms below the lip. In two specimens (fig. XLI k and l), the flange is located a centimetre or so above the neck exterior. In the one specimen from the Avillay excavations (fig. XLI n), there are two flanges at the mid-point of the rim.
6. The lip is usually flattened (fig. XLI f - h, j and m). In one case it is everted with an interior bevel (fig. XLI e), and in the example from Avillay it is rounded.
- 7a. The rim diameter ranges from 14 to 17 cms.
- 7b. The rim height varies between 8.20 and 10 cms.
8. There is no information on handles but they were possibly like those of forms X and XI.

9. There is no information on the base, but it was probably rounded.
10. All the rims, and probably the rest of the vessel, were slipped red and decorated in white.
11. The decorative possibilities for the rim are as follows:-
 - i) A red exterior and a red interior (fig. XLI j and l).
 - ii) A red exterior and a red interior, with white daubed over both faces (fig. XLI g).
 - iii) A red exterior and a red interior, with a white band around the lip, which extends to the upper part of the flange (fig. XLI e, f, h, i and m).
 - iv) A red exterior and a red interior, with a white band around the neck extending to the base of the flange (fig. XLI k and l).
 - v) A red exterior and a red interior, with a white band below the neck (fig. XLI n).
12. There is no other information. It was probably used for storage.

B. Relationships

1. There is nothing similar from upvalley.
2. There are a few similar forms from downvalley.
3. From Fundo Pando come some related forms in tipo 15 and tipo 22 (Ramos de Cox et al., op. cit., lámina 2). Its presence in the Rimac is strange in view of its absence at Pachacamac. It is not clear why the form should be separated into two types at Fundo Pando. Tipo 15 has two illustrations, one with a flange half way up the rim (a feature absent up to now in the Lurín), and one with two flanges much like the example from Avillay. Tipo 22 has one illustration where the flange

is just below the lip like the majority of examples from the Lurín. There is nothing similar from Maranga.

4 - 8. There is nothing similar.

C. Dating

The absence of this form at Pachacamac makes it difficult to date, since there are no sure grounds for assigning it to either the LIP or the LH. It should be remembered that Strong and Corbett's excavation was very large, that Uhle excavated in several different sectors, and that Bandelier obtained a respectable sample of vessels for a good part of the LIP. At present it seems best to assign it to both periods, possibly the latter part of the LIP and the early LH. If it were at all prevalent during the LH, it should have been found at Pachacamac. On the other hand, one or two specimens have a very dark red slip, such as is occasionally found on form VIIIA jars with snakes. The fact that it belongs in the white on red style which made its appearance towards the end of the LIP suggests that it may go back this far in the Lurín, even though it has no antecedents in the Bandelier collections. Since the sites where it is found in the valley were occupied during both periods, it seems sensible to assign it to both.

Orange Ware - form XIII A¹

Sample - 15 rims

Figure XLIII k - m
Figure XLIV a - j

A. Description

1. This is a very rare form which comprises plates as well as open bowls.

2. Its distribution is spotty, since there are four examples from Chontay and the rest come from Huaycán and Pachacamac.
3. There are five rims from surface collections and ten from excavations: two from Patterson's, one from Strong and Corbett's and seven from Panquilma.
4. In the plate category there is an almost whole specimen from Panquilma (fig. XLIII 1) with a rim diameter of 13 cms. It has a depth of 3.80 cms and is unusually thick, although not made from a coarse paste. The sides curve gently outwards from a flattish base. The other plates follow similar contours. There are no whole specimens for the open bowls, but from the available rims these are deeper with an even outward curve.
5. Since these are simple vessels with no corner points (an exception being the sherd from site 12 which is outside the study area) there is no discussion of rims.
6. The lips of plates are rounded (figs. XLIII k - m; XLIV a). Those of the bowls are more varied, since some are rounded (fig. XLIV e, h); some are tapered (fig. XLIV b, d, f); one is flattened (fig. XLIV g); and one has some flattening and thickening to give a small exterior overhang (fig. XLIV i).
- 7a. Rim diameters for the four plates vary from 13 to 20 cms. Those of the bowls vary from 12 to 20 cms.
- 7b. The height of plates appears to vary between 1.50 and 3.80 cms; the height of bowls between 3.50 and 7.50 cms.
8. There are no handles associated with this form.
9. The base is flattened or gently rounded for the bowls.
10. The plates are unslipped or have a white exterior slip. The bowls are unslipped, red-slipped or, in one case, white-slipped.

11. The plates have no decoration. Some bowls have painted decoration in black and/or white. All decoration is on the bowl interior. Decorative possibilities are as follows:-
 - i) A red overall slip with a white diagonal panel extending from the lip down into the interior. The panel is bordered on one side by small black flecks perpendicular to the panel (fig. XLIV g).
 - ii) A red overall slip with black diagonal stripes pendant from the lip in two different directions.
12. For comparative purposes, an illustration is given of a unique bowl from site 12 which is nearer Pachacamac (fig. XLIV j). Its very flat base with a corner point and the convex interior profile differ from those discussed here, and from anything found at Pachacamac².

B. Relationships

1. There is nothing similar from upvalley.
2. There are no examples from downvalley other than the one mentioned above from site 12.
3. There are several kinds of bowl from Fundo Pando (Ramos de Cox et al., op. cit., lámina 2, tipos 9 and 23). Tipo 9 comprises four varieties of open bowl, three of which have a flat base and a straight or outward-flaring wall. These do not resemble the study area sherds. However, the one example with a curved wall (lowest drawing on the left) does bear a resemblance to the unique rim from Patterson's excavation (fig. XLIV i). Tipo 23 is considered to belong to both the EH and the MH (Ramos de Cox et al., op. cit., p.11) and is unlike the Lurín specimens. At Maranga, bowls

and bowl fragments are found mostly in Huaca III. There is an open bowl category (Jijón y Caamaño, op. cit., p.320, shape 1) yet, despite its lack of decoration, it is classified as LIP within the Chancay Red, Black and White and Black on White styles. In my opinion, it is closer to the plainware bowls found by Strong and Corbett in the EIP levels at Pachacamac (fig. XCVII b, c). It is also a form illustrated by Patterson in his work on the Lima style (Patterson 1966, figs. 3a, 3b, 5a, 9a), and is common at EIP sites in the Lurín (Earle 1969, fig. 7 a - e)³.

4. In the upper Rimac there are bowls illustrated by Milla Villena (op. cit., lámina 4, figs. 5 - 7; lámina 5, middle figure), but they have a different rim profile and cane-stamped circles on their exterior.
5. There are few bowls at late sites in the mid-Chillón. The profiles illustrated are unlike the Lurín ones, but Guffroy states that there were other bowl sherds whose complete form was impossible to reconstruct (Guffroy op. cit., p.41). There are two kinds of bowls illustrated for Macas: one open and one enclosed (Trimborn 1969-70, p.264, C, M). The open variety has a flat base and straighter sides than the Lurín examples.
6. Bonavía illustrates no open bowls from Chilca.
7. There is nothing similar.
8. There are open bowls in the Uhle Ancón collections (Strong 1925, plates 42-47). They date from the MH to the end of the LIP. Most of those illustrated have a flat base and are decorated on the exterior. The decoration does not resemble that on the two vessels described above. The bowls from Strong's Late Ancón periods have a ring base. There are ring bases

in the study area (fig. XLVII m), most of which are white-slipped, but at present it is impossible to relate them to a particular rim form. South of the Lurín the only open bowls in Uhle's assemblage from Chincha are local variations of the Cuzco Inca style (Menzel 1966, p.116, plate XVI, fig. 79. Cf. Kroeber and Strong 1924, fig. 9 f). In the central highlands behind the Lurín valley in the Mantaro Basin, there are open bowls found in LIP assemblages (Lavallée 1967, p.425, planche 7a). These are of an orange ware and decorated with crudely painted red lines that meet in the manner depicted in fig. XLIV h. Their rim diameter is from 20 to 25 cms.

C. Dating

The form is dated as LH on grounds 1 a and 1 d. Such a date is suggested by the fact that there are some plain bowls from Patterson's excavation; the decorated specimen from the upper levels at Panquilma; the fact that all other bowl sherds come from sites with a fair amount of Cuzco-style pottery; and the fact that there are no bowl sherds from non-Cuzco sites.

NOTES

1. Form XIII includes all those forms that would be classified as bowls. It has been subdivided into three categories:- A - for open bowls and plates; B - for heavier enclosed forms with an opening far less than the maximum diameter, a form often designated "neckless olla"; C - for slightly enclosed bowls of a finer ware. These are usually decorated in some way. Those bowls with a rim diameter under 8 cms have been classed as miniature bowls under form XIV.
2. There is a similar shape in Black Ware from Chincha (Kroeber and Strong 1924, fig. 13a), which Menzel considers belongs within LIP 8 (1966, p.88).
3. Although the decoration on rim sherd "h" of fig. XLIV resembles that on sherd "e" of Earle's fig. 7, the resemblance is superficial, for the paste and colours of sherd "h" are different from those of the EIP.

Orange Ware - form XIIIIBSample - 3 rimsFigure XLIV k - mA. Description

1. This is a very rare form.
2. It occurs at two sites widely separated in the study area, Panquilma and site 109.
3. The specimens are known only from surface collections.
4. There is no whole vessel from the study area, but there is a possibly related vessel from the Bandelier collections with an indecipherable catalogue number. This is an enclosed bowl with a height of 14.70 cms and a maximum diameter of 21.50 cms. The rim diameter is 11.50 cms and it has a flat base with a diameter of 8.50 cms. It has a slightly flattened lip and is unslipped and unburnished.
5. Not applicable.
6. The lip is rounded with a slight interior bevel.
- 7a. There is considerable variation in the rim diameters, from 10 to 32 cms, which would make the vessel represented by sherd "m" very large. The other two sherds (fig. XLIV k and l) have rim diameters similar to that of the Pachacamac specimen.
- 7b. Not applicable.
8. It is unlikely that these vessels had handles.
9. There is no information on the base.
10. There is no slip, although the large pot may have had white paint daubed over its exterior.
11. There is no decoration.

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley.
3. At Fundo Pando tipo 20 (the top and bottom drawings) shows some similarity to this form, although the middle drawing is probably an EH form because of its comma-shaped lip. At Maranga there is a deep enclosed plainware bowl from Huaca III (Jijón y Caamaño op. cit., p.323, shape 6). This vessel is said to come from tomb LXXXVII in association with a flaring-rimmed vessel with press-moulded decoration around the upper shoulder and two small vertical handles (Jijón y Caamaño op. cit., p.58, fig. 37). The tomb is likely to be LIP.
4. Enclosed bowls from the upper Rimac valley were mentioned for form XIIIA, but their walls are not as incurving as in this form.
5. There are no enclosed bowls from late assemblages in the mid-Chillón, but Guffroy does find such bowls in EH assemblages from Checta and Santa Rosa de Quives (Guffroy op. cit., fig. 2). However, the Santa Rosa site has sherds of several different periods on its surface, so that not all the bowls need be early (Guffroy op. cit., p.50). There is nothing similar from Macas.
6. There are a few rim forms of enclosed bowls illustrated by Bonavía (op. cit., lámina 6, figs. 20, 23; lámina VII fig. 7, 14 - 15). Most are unique and the lip treatment is slightly different from that of the Lurín specimens.
7. There is nothing similar.
8. This kind of enclosed bowl has a long history on the central coast and in the Lurín valley (Patterson op. cit., fig. 1f; Earle 1969, p.30, fig. 9d). At present there are no

similar plainware bowls from late assemblages elsewhere.

C. Dating

The scant sample makes this form difficult to date, but the bowl in the Bandelier collections is unique among 236 vessels, so that one might not expect to find many examples in the study area. It is tentatively dated as LIP on grounds 2 b and 2 c.

Orange Ware - form XIIIIC Sample - 8 rims Figure XLV a - f

A. Description

1. This is a very rare form which comprises all decorated, enclosed bowls. These may be carinated (fig. XLV d - f), almost straight-sided (fig. XLV a), or enclosed with a prominent interior bevel (fig. XLV b - c).
2. One specimen comes from the Sisicaya sector, two from Chontay, four from Huaycán, and one from Pachacamac.
3. There are five rims from surface collections and three from excavations. Two of the latter come from the Panquilma excavation and one from Strong and Corbett's at Pachacamac.
4. Four rims are large enough to give a good idea of the complete vessel (fig. XLV d - f). These are small bowls with gently incurving walls and are usually lightly burnished. Their base was probably rounded and there is a corner point or carination on the exterior, a couple of centimetres below the lip. Some seem Orange Ware imitations of Black Ware bowls and possess small lugs at the carination. The bowl from Pachacamac may not have possessed lugs. Two other rims

from Panquilma (fig. XLV a) show a vessel with an almost straight wall and possibly a rounded base. The lip treatment and decoration are different from the preceding ones. Finally there are the more enclosed bowls (fig. XLV b - c), whose complete form is difficult to ascertain because of the small size of the sherds.

5. Not applicable.
6. The lips of the carinated bowls are slightly tapered and rounded (fig. XLV d - f); those of the straight-sided bowls are also tapered but with a slight interior bevel. The third variety of bowls has a lip similar to that of Orange Ware form II.
- 7a. For the carinated bowls the rim diameter varies between 12 and 24 cms. For the straight-sided bowls there is a similar variation and the third category has a diameter around 12 cms.
- 7b. This measurement is not applicable here, but the height of the carinated bowls is estimated as being around 6 cms.
8. There are no handles, but there are small lugs on the carinated bowls. These are from 2 to 3 cms in length and protrude about 1 cm out from the surface of the vessel. They are usually incised with five or six small slashes.
9. It is likely that most bases were rounded.
10. Most examples are unslipped (fig. XLV a - c and e), although of these "b", "c", and "e" are burnished, the latter on both the interior and exterior. Other vessels have a red slip (fig. XLV d and f). One of these (fig. XLV f) is burnished.

11. The decoration is varied and may be summarised as follows:-

a) for the unburnished vessels:

i) A series of small protuberances, 1 cm in diameter, is modelled around the vessel exterior, 3 cms from the lip (fig. XLV a).

ii) A red exterior and interior with a thick white band painted around the exterior, extending from lip to carination. On this is a design consisting of alternating groups of black vertical lines and black diagonally-placed wavy lines (fig. XLV f).

b) for the burnished vessels:

i) A red exterior and interior with a narrow white band around the lip exterior on which narrow black stripes are painted at regular intervals. The lug is also painted white and the incised grooves are black (fig. XLV f).

ii) Unslipped but burnished, the only decoration being the small grooves or slashes in the lug (fig. XLV e).

iii) Unslipped but burnished with an incised design on the lip. The design consists of diamonds with a small circle inside (fig. XLV b).

iv) Unslipped but burnished with a black band around the lip interior (fig. XLV c).

12. Kroeber and Strong call similar Black Ware bowls that Uhle found in Chincha graves "yarn bowls", because of the balls of thread found inside (Kroeber and Strong 1924, p.21, plate 13). Ravines also described a small Black Ware bowl found inside the wrappings of a mummy from Ancón as a spinning aid (Ravines and Stothert 1978, p.165). It is likely

that these small Orange Ware bowls had a similar function.

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley, although at Pachacamac there are carinated bowls with small modelled frogs on the rim (E.J. McDougale, personal communication, 1970. Also fig. LII j).
3. At Fundo Pando tipo 12 (upper drawing) resembles one of the valley forms in being both carinated and in having small lugs (Ramos de Cox et al., op. cit., lámina 2). At Maranga most of the bowls come from Huaca III and are found in the fill with Lima-style sherds (Jijón y Caamaño, op. cit., p.302, shape 5). One bowl belonging to this shape, which is carinated, comes from tomb X of Huaca IV, and has an LIP jar associated with it (idem, p.105, tomb X). All the graves in the Huaca IV cemetery belong to this period. An incurving bowl with a Chancay Black on White style decoration is stated to come from the fill of Huaca III (idem, p.302). Similar bowls can be seen in Kroeber 1926, plate 82, c and e.
4. There is nothing similar.
5. There is nothing similar from late assemblages in the mid-Chillón, although a carinated bowl is found in an EIP assemblage (Guffroy, op. cit., fig. 5j). It differs from the Lurín carinated bowls in having a flat lip. There is nothing similar from Macas.
6. Bowls from Chilca have already been mentioned in discussing form XIII A. There is nothing similar to any variant of XIII C.

7. There is nothing similar.
8. There is nothing similar from other areas.

C. Dating

The carinated form is dated as LH on grounds la, c and d. The fact that this form is found in Strong and Corbett's excavation and seems to be an Orange Ware version of a commoner Black Ware bowl is the strongest argument for considering most of these bowls to be LH. There are no bowls from the Bandelier collections, other than the one mentioned for XIIIIB, and the few LIP bowls from the Uhle collections are different in shape and decoration (Uhle op. cit., plate 7, figs. 2 and 6). The straight-sided bowl with the protuberances bears a resemblance to a form II vessel, which has already been dated as LH (fig. XXI c). The bowl with the incised lip (fig. XLV b) is the most difficult to date, but incised decoration on the lip is a feature of LH Black Ware (fig. XCIV j) and the sherd is probably no earlier.

Orange Ware - form XIV

Sample - 44 rims

Figure XLV g - p
Figure XLVI a - u

A. Description

1. This is a rare form which is usually made from the finest of the Orange Ware pastes and may exhibit spots of green glaze due to overfiring (fig. XLVI f).
2. Its distribution is spotty since it has been found at about two sites in each sector and over 75% of the sample comes from excavations.

3. There are seven rim sherds from surface collections and 37 from excavations: seven from Patterson's excavation, two from Strong and Corbett's, eleven from pits 6, 7, 10, 11, and compartments 3 and 5 at Avillay; and seventeen from the Panquilma excavation.
4. The form is that of a miniature bowl. Although these bowls exhibit variations in lip treatment and decoration, there are enough similarities to classify them together. An almost complete specimen comes from Pachacamac (fig. XLV g). This has a rim diameter of 6.70 cms (excluding the lugs) and a height of 3.50 cms.¹ It is burnished and probably once had four lugs extending from the lip, one at each quarter of the vessel. Each lug is incised with three grooves, like the lugs on the bowls of form XIIIIC. There is no other decoration. The bowls from the study area are rounded, like the one described above, with slightly incurving walls (fig. XLVI j, k, m, o, p, r, t and u), or more open (fig. XLVI l, q and s). In other instances they are open with a flattened or rounded base and a small rim (figs. XLV h - p; XLVI a - i).
5. Those bowls with small rims have a tiny flare at an angle of 90° or more with the neck interior. The interior flare is straight, or in a few cases slightly convex (figs. XLV l, o; XLVI c). The exterior can be either straight (fig. XLV j, n), or curved (fig. XLVI c, g).
6. The lip is usually tapered (fig. XLV i - k, m, n and p), sometimes rounded (fig. XLV h, and fig. XLVI o, r), and in one case flattened (fig. XLVI q).
- 7a. The rim diameter varies between 5 and 8 cms, the majority of rims being 6 cms.

- 7b. In the measurable examples the height of the bowls varies from 2.65 to 3.50 cms.
8. Some bowls (fig. XLV h - l) have tiny handles where a roll of clay, less than 1 cm wide, extends from lip to upper shoulder, much in the manner of handles on form IV (cf. fig. XXIII a). Bowls of this kind often have a decorated rim interior (fig. XLV l). Other bowls, usually those without a rim, have the small lugs discussed in section 4 above (figs. XLV g; XLVI m, p - u). These projecting lugs are usually incised with small grooves, which are then painted (fig. XLVI q). Some lugs are almost crescent-shaped (fig. XLVI m), and others project out in a more rectangular fashion (figs. XLV g; XLVI q).
9. The bases are usually rounded (figs. XLV g; XLVI a and f). Some, however, are flattened (fig. XLVI n) and one is completely flat (fig. XLVI h).
10. Most bowls are unslipped but given a light burnish. A very few have a white slip, and one a black (fig. XLVI e).
11. The decorative possibilities are as follows:-
 - a) for bowls with rims:-
 - i) Unslipped and apparently unburnished (fig. XLV i).
 - ii) Unslipped and lightly burnished on the interior and exterior (figs. XLV h, j, m - p; XLVI a - d).
 - iii) Unslipped and burnished, with a zigzag line incised around the rim and the intervening triangles filled with three short horizontal slashes (fig. XLVI h).
 - iv) Unslipped and burnished, with the rim interior painted white and black diagonal or vertical stripes painted on this (figs. XLV k; XLVI f). In one case the stripes are red (fig. XLV l).

11. a) cont.

- v) A black slip over the interior and exterior (fig. XLVI e).
 - vi) A white slip over the interior and exterior and crudely-executed diagonal incisions around the rim interior (fig. XLVI g).
- b) for bowls without a rim:-
- i) Unslipped exterior and interior with a light burnish (fig. XLVI j, k, and possibly l).
 - ii) As above with incised lugs. These slashes can be fairly long, deep grooves, as in fig. XLV g, or short, shallow ones as in fig. XLVI m. (See also fig. XLVI s).
 - iii) Unslipped and unburnished, but the lug is painted white with black stripes instead of incised grooves (fig. XLVI n, r and q).
 - iv) As no. iii) but the lug is daubed with white paint (fig. XLVI t).
 - v) As no. iii) but the lug is incised with three slashes, and then painted white and the slashes filled with red paint after firing (fig. XLVI u).
 - vi) Unburnished with an unslipped interior. The exterior is slipped white to the point where the vessel wall curves underneath to form the base, which is red. On the exterior is an incised double "V" shape, the incisions filled with black paint and three black vertical lines painted from the lip towards the apex of the "V" (fig. XLVI o).
 - vii) Unburnished and unslipped, with a white stripe around the lip interior and a plain lug. A few short black vertical stripes extend from lip interior to lip exterior (fig. XLVI p).

12. Miniature bowls were probably manufactured as grave goods. This is confirmed by the fact that most of the Lurin sherds come from excavations into refuse that originated because of the looting of graves in the early Colonial period. Furthermore, 'in other valleys such vessels are usually found in graves², as was the Uhle specimen discussed above.

B. Relationships

1. There are no miniature bowls from upvalley.
2. There are a few from downvalley sites.
3. At Fundo Pando, tipo 6 (upper two drawings) is the only form that resembles the miniature bowls with rims from the Lurín, but it is not clear from the diagrams or text whether these are indeed bowls or jar rims (Ramos de Cox et al., op. cit., lámina 2). There are miniature vessels from Maranga (Jijón y Caamaño, op. cit., p.41, tomb CLXXXVI).
4. There is nothing similar.
5. There is nothing similar from the mid-Chillón, but at Ancón Strong illustrates miniature bowls for his Late Ancón II period (Strong 1925, plate 43 a, d). These are similar in shape to those illustrated in fig. XLVI k and l, but with different decoration and no lugs.
6. There is nothing similar.
7. There is nothing similar
8. Miniature bowls occur all over Peru during most time periods and usually come from graves or caches³. The fact that there appear to be no miniature bowls from neighbouring valleys merely reflects the fact that the collections used here for comparison are mainly from the surface, not from excavations.

C. Dating

Most of the miniature bowls illustrated here belong to the LH on grounds 1a and 1c. Both rimmed and rimless bowls occur in the two separate Pachacamac excavations that can be dated as LH. The rimless bowls usually have lugs and are reminiscent of LH Black Ware miniatures and of the larger Black Ware carinated bowls (figs. XCII; XCV). Such traits as burnishing and incision on the rim are also LH features, as is the bowl form itself, which is almost absent from the Bandelier collections. The bowls with the handles are also reminiscent of form IV which has been already dated as LH. Finally, miniature bowls are absent from all sites without Cuzco-style pottery. The evidence for an LH dating thus seems conclusive.

NOTES

1. Uhle (op. cit., plate 18, fig. 10) illustrates an identical bowl from the Temple of the Sun excavations. It seems to be of similar size to the one mentioned above, but instead of a fourth lug it has a small bird's head. He states that the other three lugs represented the bird's wings and tail. It is likely that the Strong and Corbett bowl was the same, although in the study area most bowls had only two lugs like their Black Ware counterparts.
2. See for example Menzel's list of the grave contents from Uhle's Chinchá excavations, where eleven burials have miniature vessels, often in pairs (Menzel 1966 Appendix B, pp.135-140). Her list of associated vessels in graves excavated by Uhle at Ica also shows that graves there usually contained one or more miniature vessels made from a variety of pastes (Menzel 1976, pp.247-256).
3. See, for example, Kroeber and Strong 1924a, plate 27f for Nazca; Kroeber 1925, plate 73 k for Supe; Kroeber 1926, plate 84 f for Chancay.

Orange Ware - form XVSample - 25 rimsFigure XLVI v - z
Figure XLVII a - hA. Description

1. This is a very rare form.
2. It is found in all sectors of the study area and in excavations, but not at Pachacamac.
3. There are sixteen examples from surface collections and nine from excavations. Of the latter, five are from Panquilma and four from Avillay, pits 10, 11 and compartment 3.
4. There is no complete specimen from the study area. The best impression of a whole vessel comes from the sherd in fig. XLVI v. It should be compared with the Brown Ware form in fig. XIX c, which has a similar shape. The former was probably about 6 cms high with a rim diameter of 5 cms. The rim accounted for one sixth of the total height and flares outwards to a tapered lip. The pot was slipped red with white paint daubed over it. There are no handles, although one specimen has horizontal handles (fig. XLVII f).
5. The rim is either flaring from an obtuse angle at the neck interior (figs. XLVI v, x - z; XLVII f, g), or it extends straight upwards. It usually comprises about one sixth of the total vessel height, but in one case it is very tall, probably half the total vessel height (fig. XLVII e).
6. The lip is tapered (fig. XLVII a, d), or rounded (figs. XLVI w; XLVII c, e, g). In three cases it has an exterior bevel (figs. XLVI y, z; XLVII b).

- 7a. The rim diameter varies between 3 and 8 cms, but the majority of rims are from 3 to 6 cms.
- 7b. The rim height varies between 1.10 and 3 cms.
8. The size of most vessels precludes their having handles. The sherd with a horizontal handle (fig. XLVII f) may be from a small vessel, i.e. 10 to 13 cms high, rather than a miniature one, i.e. under 10 cms high. Its handle is less than 1 cm wide.
9. The base was probably rounded.
10. Some vessels were slipped red, with or without white decoration. Others were slipped white and some were unslipped. No vessel was burnished.
11. The decorative possibilities for rim and body are as follows:-
 - a) Unslipped (figs. XLVI y; XLVII a, c, d).
 - b) A white exterior and rim interior (figs. XLVI w, z; XLVII g).
 - c) White on the rim exterior extending to the upper shoulder. From this band white vertical panels extend downwards on the unslipped surface (fig. XLVII b).
 - d) Red exterior and interior (fig. XLVII e, h).
 - e) White daubed over a red exterior and interior (fig. XLVI v).
 - f) Red exterior and interior, with a white band around the neck and vertical white panels extending downwards from this (figs. XLVII f; XLVI x).
12. Like the bowls, the function of the miniature jars is purely mortuary. Reiss and Stübel illustrate miniature jars from Ancón (1880/87, plate 100, figs. 5, 6, 7). They can also be

found in graves in many coastal valleys, but to the best of my knowledge have never been found in a domestic context.

B. Relationships

1. There is nothing similar from upvalley.
2. There is nothing similar from downvalley.
3. There is no mention of miniature vessels from Fundo Pando.
At Maranga, Jijón illustrates a miniature jar with a flaring rim that is somewhat similar to the Lurín vessels (Jijón y Caamaño, op. cit., p.331, fig. 22). There is also another dissimilar form (idem, p.339, fig. 38).
4. There is nothing similar.
5. There is nothing similar.
6. Bonavía mentions no miniature jars in his Chilca collection from Puerto Viejo. The smallest rim in his group I plainware measures 5 cms (op. cit., p.158), but unfortunately he does not relate the measurement to any particular rim illustrated.
7. There is nothing similar.
8. There are miniature jars from Chíncha and Ica (Kroeber and Strong 1924, p.24, fig. 10; 1924a, plates 28a, 37g, h).
Most are decorated and from different time periods. None bears a resemblance to the Lurín examples.

C. Dating

The evidence for dating is inconclusive because there are no specimens from Pachacamac. On negative grounds of 2 b, it might be considered LIP. Unlike form XIV it is found at sites which have no Cuzco-style pottery, such as 71. On the other hand,

its presence in mixed-period excavations at Panquilma and Avillay suggests that it lasts into the LH, as does the decorative feature of white vertical panels on a red slip. At present it seems that only specimens with recognisably LH features, such as the snake, will be able to be placed with certainty in this period.

Orange Ware - form XVI

Sample - 16 rims

Figure XLVIII

Figure XIX a - b

A. Description

1. This is a very rare form made from the coarsest of the Orange Ware pastes.
2. It is found in the Chontay and Huaycán sectors and at Pachacamac.
3. There are ten rims from surface collections and six from excavations at Pachacamac: five from Strong and Corbett's and one from Patterson's. Uhle also excavated a whole specimen from the northwest part of the town (op. cit., p.63, fig. 66).
4. The Uhle vessel is not the only complete one, for there is one on exhibition at the Museo de Sitio in Pachacamac (fig. XLVIII a). It is 80 cms high with a rim diameter of 30 cms. The vessel body is oval with a rim that slants inwards and is about one tenth of the total vessel height. There are two horizontal handles placed opposite one another on the upper shoulder just below the neck. No more than three centimetres to the right of each handle is a tiny bump that has been modelled from the surface. The vessel is slipped red and the rim is painted white to just beneath the neck. White

panels that are 17 cms at their widest extend from this neck band to the base of the vessel. The handles are painted white as are the nubbins. The white paint extends into the whole of the rim interior.

5. The rim form for these large jars varies although, because of the coarse paste, it is assumed that the rims belong to jars very similar to the whole specimen illustrated. The rims on jars like those in fig. XLVIII a slope inwards from the neck at a very obtuse interior angle (fig. XLVIII b - e). There are also rims with a straight profile, but that slope outwards from the almost vertical (fig. XLVIII h, j) to an angle of about 30° (fig. XLVIII i). Some of these have a convex interior profile (figs. XLVIII g, l; XLIX a, b). Finally, there are two examples with a concave interior profile (fig. XLVIII f, k).
6. The lip is usually everted and flattened (fig. XLVIII b - d, f, i). Otherwise it is thickened and flattened (fig. XLVIII e, k); or else thickened with an exterior bevel (figs. XLVIII g, j, l; XLIX a, b).
- 7a. The rim diameter varies between 16 and 40 cms, most rims falling in the lower half of the range.
- 7b. The rim height varies between 3.60 and 8.60 cms.
8. The handles on the Pachacamac specimen were 3.50 cms wide. It is likely that the other jars had similarly positioned handles, though their function is problematical since they are too small to lift or tip the jar.
9. The base was most likely to be gently pointed for ease in setting on the ground. Parts of such large bases can be found in Strong and Corbett's excavation and in 1966 the remnants of one were still in situ at Panquilma.

10. Only one vessel was totally unslipped and undecorated (fig. XLIX b). The rest had a red slip with white decoration or were unslipped with some white paint daubed over them.
11. The decorative possibilities are as follows:-
 - a) for the rim:-
 - i) All white exterior and interior, painted over the red slip (fig. XLVIII a, c, d, f, j).
 - ii) Red exterior and interior (fig. XLVIII b, e).
 - iii) Unslipped exterior with white paint daubed over it (figs. XLVIII g - i; XLIX a).
 - iv) Red exterior and interior, with a white band around the lip (fig. XLVIII k, l).
 - v) Unslipped (fig. XLIX b).
 - b) for the body:-
 - i) White vertical panels on a red background, similar to the decoration on form VA and form VIIA vessels.

There may be other methods of decoration, but these are not evident from the sherds collected so far.
12. These vessels are usually considered as large storage containers for maize or chicha, although the one Uhle found had no contents (Uhle, op. cit., p.63). However, if they were set into the ground, liquids or grain could only be obtained by ladling them out with a smaller pot. It would be hard to tip this or a form III vessel in order to pour out liquid, as one can do with the present chicha jars from Santo Domingo de los Olleros. These are narrower, with a more pointed base and less capacity. Another possible function is that of a funerary urn (Villar Córdova 1935, pp.396-397). It is also possible that these jars were multi-purpose.

B. Relationships

1. There are no examples from upvalley.
2. There are a few examples from downvalley.
3. At Fundo Pando tipo 4 (bottom drawing), tipo 17 (middle drawing) and tipo 18 (bottom drawing) may be rims of large jars of a coarse paste (Ramos de Cox et al., op. cit., lámina 2). At Maranga Uhle found the only large storage jars of the early MH and these are of a completely different shape (1908, p.364, fig. 14).
4. There is nothing similar.
5. There is nothing similar in the mid-Chillón. At Ancón Reiss and Stübel illustrate a large red storage jar that is undecorated (op. cit., plate 92), but its general contours are more similar to form III.
6. Bonavía illustrates no similar rim form from Chilca, although some sherds in his second group of plainware are 1 cm thick, which suggests a large storage jar.
7. There is nothing similar.
8. There is nothing similar from elsewhere.

C. Dating

The form is dated as LH on grounds 1 a, c, and d. Uhle states that the example illustrated came from excavations in house foundations to the northwest of the site near cemetery VI. Inca aryballi were also found there. Such a dating is further confirmed by its appearance in both Patterson's and Strong and Corbett's excavations. The decoration is similar to that found on forms VA and VIIA, both dated as LH and it is not found at any site without Cuzco-style pottery¹.

NOTES

1. It is also of interest that a worker at Pachacamac told me that a similar jar had been found under a rubbish heap at Puente de Lurín, the pueblo joven at the edge of the ruins. It contained Spanish alpargatas (sandals), a velvet-like material and a headdress with feathers.

Orange Ware - miscellaneous forms - plain

Sample - 13 rims

Figure XLIX c - j

A. Description

1. Each of these forms is unique, although most take the shape of a flask with a narrow bottle-like neck less than 5 cms in diameter.
2. The distribution is spotty, the majority of specimens coming from Panquilma, because such large surface collections have been made there. There are a few specimens from the Chontay sector and one from Huaycán.
3. There are twelve miscellaneous vessels from surface collections and one from the Panquilma excavation.
4. The first vessel is a unique jar, similar to form VI, the difference lying in the lack of handles and the very obtuse angle at the neck interior, so that there is scarcely a line of juncture on the interior or exterior (fig. XLIX d).
A similar vessel can be found in the Bandelier collections (fig. XLIX c), although it is taller. Both are unslipped and undecorated. The other vessels are mostly from Panquilma and classified as flasks, because of their narrow collars. Fig. XLIX g shows a vessel with an elliptically-shaped body whose contour varies according to the angle from

which it is viewed. It is 19 cms high with a rim diameter of 4 cms. On its widest face is a hole, 6.70 cms in diameter. The vessel is slipped red, with a few crudely painted white stripes, and small vertical handles on the shoulder. Another flask (fig. XLIX h) is 14 cms high with a wider rim diameter of 5 cms. The body is lenticular and there are two vertically placed loop handles just above the point of maximum diameter. It is unslipped.

Finally there are two bottle rims, just over 3 cms in diameter, with tubular handles extending from half way up the rim to the upper shoulder. Both are unslipped.

5. Rims are straight or slightly outward-flaring and the interior neck angle is always obtuse.
6. The lips are rounded and sometimes tapered.
- 7a. The rim diameter for the flasks varies between 2.50 and 5 cms.
- 7b. The rim height for the flasks varies between 4 and 5 cms.
8. The handles are varied, as can be seen in the figures cited above. The tubular ones were 1.10 cms in diameter. The others were not measured, but fall within the range of variation for loop and strap handles.
9. The bases appear to have been rounded.
10. The only slip on the Lurin forms is a red one.
11. The only decoration was the white stripes on fig. XLIX g.

B. Relationships

1. Up-valley there is one bottle-like rim, similar to those depicted in fig. XLIX i and j, the only difference being that a face is modelled on one side. The sherd is extremely worn so that it is impossible to give further details.

2. There are a few examples from downvalley. From Pachacamac Uhle illustrates a vessel whose rim is very similar to those illustrated in fig. XLIX i and j (op. cit., p.66, fig. 86). The body of the vessel is half of an ovoid with a flat base. It is slipped red with a white band around the neck exterior and radiating from this, at intervals, are groups of two white bands which extend vertically from neck to base. There are others in the collections in Philadelphia, all from the north-west part of the town, i.e. the LH sector. There is nothing like the forms illustrated in fig. XLIX g and h, which should be compared with flasks from the late MH and LIP in the Bandelier collections (fig. XLIX e, f). They are dissimilar.
3. Although Ramos de Cox illustrates several spouts and bottle-shaped rims from Fundo Pando, none resembles the rims from the study area, the exceptions being Tipos 8, 19 and 10, (lowest drawing in each case). However, the vessel lips are different from the Lurín examples. At Maranga, in his excavations in the LH cemetery in Huaca I, Jijón y Caamaño found two Orange Ware flasks (op. cit., p.109, fig. 76; p.113, fig. 80). One has white on red decoration, which includes a bird painted on one side, and is comparable to the ones mentioned for Pachacamac. The other has a wider rim diameter and a globular body, as well as a single handle in the shape of a monkey. In his discussion of plainware he illustrates several other flasks (op. cit., pp.338-342, figs. 35-47), mostly from Huaca III, although only the two from Huaca I resemble the study area specimens in rim shape and in the fact that the handles extend from mid rim to shoulder, (op. cit., p.342, fig. 46).

4. There is nothing similar.
5. There is nothing similar from the mid-Chillón or from Macas. From Ancón there are several flasks, though none quite like the Lurín specimens. Reiss and Stübel illustrate a small red flask with a bird-man in low relief on one side (1880/87, plate 93). The rim is similar to the Lurín specimens illustrated in fig. XLIX i and j, but it apparently has only one handle. Strong dates it as Inca or Late Ancón II (1925, pp.187-189). In the Uhle collections from Ancón the flasks all occur in the Middle Ancón I and II periods and are in the Teatino style¹. They resemble some of the flasks in the Bandelier collections rather than any of the study area specimens.
6. There is nothing similar.
7. There is nothing similar.
8. Kroeber illustrates nothing similar from Cañete, but from Chincha there are general similarities in shape and handle position between some of the flasks found by Uhle, and illustrated by Menzel (1966, plate XI, figs. 17-22), and the ones illustrated in fig. XLIX g and h. The Chincha flasks, however, have taller rims than the study area specimens and often a single handle. Menzel dates them as LIP, Epoch 8 and LH.

C. Dating

The jar in fig. XLIX is likely to be LIP because of its similarity to one from the Bandelier collections. The flasks in fig. XLIX i and j are likely to be LH on grounds 1 a, c and d. The most significant fact is that similarly shaped vessels were found in Uhle's excavations in the northwest part of the town.

The remaining two forms are more difficult because each is at present unique. On the balance, an LIP date is preferred because of their type of handle. the lack of white bands and stripes, and the fact that they cannot be related to anything associated with Cuzco-style pottery.

NOTES

1. Strong 1925, plates 44 e; 45 b; 46 b, and e; 47 h, m, n. Menzel illustrates three of these jars and gives them an MH 2B date (1977, figs. 100, 101 and 108).

Orange Ware - miscellaneous forms - decorated Figure LI a

A. Description

1. This unique flask is considered separately because its decoration in the Red, Black and White Geometric style clearly ties it to the LIP.
2. It was found on the surface of Panquilma in the 1966 survey.
3. Not applicable.
4. The vessel height is estimated to be from 10 to 12 cms.
The rim diameter cannot be measured because the lip has been broken, but the interior neck diameter is 3.25 cms. It is an unusual shape, having a canteen profile with the decoration confined to the larger surface area. It also has a definite shoulder, but its base is unknown, neither is it clear whether there were any handles. The rim flared outwards from the neck in a straight even profile. The decoration is very worn, but there are enough traces to show that it is executed in the above-mentioned style. The background is the natural

orange colour of the paste. Just below the neck is a horizontal white band, less than 1 cm wide, and outlined with a black stripe above and below. Along this is a series of vertical red bands, outlined on each side in black, and separated from one another by two black vertical stripes. Beneath the white band is another of similar width in the orange colour of the fired paste. Beneath this the vessel is white, with what was probably a series of red zigzag bands going diagonally from left to right and outlined in black. At the corners are small white squares outlined in black with a black dot in the centre. The vessel was well burnished.

5 - 11. These points have already been discussed under section 4.

B. Relationships

1. There is nothing similar from upvalley.
2. At present there is no sherd in this style from the down-valley sites, as would be expected, since there are complete vessels from Pachacamac. In fact, Uhle found more vessels in this style in front of the Temple of Pachacamac than he illustrated in his report (op. cit., plate 7, figs. 4, 5; plate 8, figs. 4, 6. See also Mason 1957, plate 31B for additional examples). Furthermore, there are at least two such vessels in the Bandelier collections.
3. There is nothing from Fundo Pando, but Jijón y Caamaño excavated two Red, Black and White geometric pots from Huaca III at Maranga (op. cit., p.31, fig. 53; p.85, fig. 58). Stumer (1954, pp.253-259) mentions the style as occurring at a few late sites in the lower Rimac and Lothrop (Lothrop and Mahler 1957, p.7) confirms the fact that it is found at Pariache.

4. There is nothing similar.
5. According to Lothrop (*ibidem*) the style occurs at Macas, and at Ancón it forms the basis of Strong's Late Ancon I period (1925, plate 43 i - n). It is also found in association with Chancay Black on White in a grave at Zapallán in the lower Chillón (Lothrop and Mahler 1957, plate 1a).
6. There is nothing similar.
7. There is nothing similar.
8. The style is known from the Chancay and Huaura valleys to the north (Kroeber 1926, plates 83a; 85 d, i; Lothrop and Mahler p.7). Lothrop (*ibidem*) mentions sherds being found as far south as Pisco and also suggests a relationship between this central coast style and Red, Black and White vessels found at Moche.

C. Dating

There is no doubt that this is an LIP style and therefore the small Lurín jar may be dated to this period on grounds 2 c and 2 d. At present, however, there is little indication as to which part of the LIP it belongs. Lothrop remarks on the considerable time-depth of central coast styles because several are found together in the same grave at Zapallán (*op. cit.*, pp. 10 - 12). On the other hand, Strong, Stumer and Willey place it in the early part of the LIP, if not the end of the MH, because of its association with the Epigonal style at Ancon (Strong 1925, p.159; Stumer, *op. cit.*, p.235; Willey 1943, pp.207-208). The difficulty probably arises because the style's range of variation has not been carefully defined and it is often thought to comprise some later black and white on red styles (*cf.* Lothrop and Mahler 1957, plates I-IV). My own feeling is that the style

dates to the earlier part of the LIP in the Lurín, because it occurs in the Bandelier collections which contain no later styles, such as the White on Red or the Ichimay (see Bueno 1979 ms).

It is also interesting that this distribution limit in the Lurín coincides with that in the Rimac and Chillón, for Pariache, Macas and Panquilma are a similar distance from the coast.

Orange Ware - miscellaneous decorated sherds

Total Sample - 639

Figure LI b - j
Figure LII a - d

N.B. This category comprises the range of decoration found on body sherds and a few unique rims. Only a few can be associated with specific vessel forms. The previous descriptive system is abandoned. Instead there are 3 sections on Description, Relationships and Dating.

Incised and Punctate Decoration

A. Description

The sherds fall into three groups. The first group consists of zones outlined by incision and filled with small punctations. Two (fig. LI d, e) have deep shallow grooves as well. These sherds can be unslipped (fig. LI d, e) or white-slipped (fig. LI b, c). The second group consists of sherds with straight, incised lines that form rectangles on a red-slipped or unslipped surface (fig. LI f, g). The third group consists of sherds with cane-stamped circles. These can be subdivided into two. The first subdivision consists of circles that range in size from 0.65 to 1 cm in diameter and are stamped on an unslipped or a white-slipped surface (fig. LI h; LII a - c). These are probably from form VIIA vessels (cf. fig. XXX b). The second subdivision consists of very small circles,

about 0.20 cms in diameter, that encircle a rim exterior in one case and are placed in a random fashion on a body sherd in another case (figs. LII d; LI i).

B. Relationships

The sherds of the first group have been found at downvalley sites and are related to the decoration on a few jars in the Bandelier collections (cf. figs. XXXVIII k; XXXIX b). These show a similar pattern of zigzags filled with punctations on the rim of forms X and VIIB jars. They are also related to painted and press-moulded vessels found at Pachacamac and Maranga, where white zigzags are filled with black dots (Uhle op. cit., plate 5, figs. 4, 5; plate 8, fig. 9, and Jijón y Caamaño op. cit., p. 53, fig. 31; p. 58, fig. 37. See also Reiss and Stübel op. cit., plate 96-18 and 99-13). These designs also bear a resemblance to Teatino, an MH and early LIP style of the central coast (see Bonavía 1961, láminas III-B, fig. 11; IV-A, fig. 27; VI-B, fig. 17).

With regard to the second group, it has not been possible to relate the simple incised sherds to any vessel form. The motifs are too uncertain and the sherds too few to do more than record their presence.

The cane-stamped circles have already been discussed under form VIIA and the majority of sherds are probably from such vessels. The smaller circles are problematical. There are two vessels in the Uhle collections from Pachacamac, that are incised with small circles. One is a crude face-neck jar from the oldest part of gravefield I (catalogue number 27250 (831)), with four rows of small circles, 0.30 cms in diameter, stamped around the upper shoulder. The second vessel is an enclosed bowl from gravefield II

(catalogue number 27249 (1341)), with two rows of similar circles around the shoulder. Neither, however, resembles the sherds illustrated here, in spite of the small size of the circles. Bonavía does illustrate cane-stamped sherds from Chilca. These show small circles incised around rim exteriors and at random on body sherds (1959, lámina XI, figs. 2, 5, 6). However, the rims on which they appear do not resemble the Lurín specimen, being much thicker on the exterior (Bonavía op. cit., lámina 6, figs. 1-6). There are also cane-stamped circles on bowl exteriors of an Orange Ware in the upper Rimac (Milla Villena, 1974/5, lámina VI, figs. 6, 7) and on a Brown Ware in the Huarochirí collections (fig. XCVIII n - q), but the Huarochirí circles are larger than the Lurín ones.

C. Dating

The incised and punctate decoration is LIP because it appears on vessels in the Bandelier collections, which have been dated as belonging to this period. The sherds with no more than incised lines cannot be dated at present. The sherds with the cane-stamped circles date mostly to the LIP since they have no clear association with the Cuzco style. For example, they are not found in Strong and Corbett's or Patterson's excavation at Pachacamac. Milla Villena and Thatcher place this kind of decoration in the MH (Milla Villena op. cit., p.57; Thatcher 1969, p.7) and it may well go back that far in the Lurín.

Red Slip with White Painted DecorationFigure LII e - fA. Description

Most of this decoration has already been associated with specific vessel forms. Two other kinds of decoration can be seen in the figures. The first shows white vertical bands, rather than panels, pendant from a white band that encircles a jar neck (fig. LII e). The other sherd shows white vertical bands, and perhaps frets, creating red zones in which white "eye" shapes are painted (fig. LII f).

B. Relationships

The white bands on a red background are found in collections from downvalley sites and at Pachacamac. There are at least two flasks in the Uhle collections (catalogue numbers 31916 (3134a); 31917 (2859)) with such bands extending from a white neck band, either singly or in pairs. They both come from the northwest part of Pachacamac. The other motif has not yet been recorded elsewhere, although it is tempting to see it as part of a face on a vessel body.

C. Dating

The white band design is likely to be LH in date, for there are similar sherds from Strong and Corbett's excavation. Although the White on Red style has its origins in the LIP, the earlier examples tend to have single, well spaced bands that form rectangles or the letter V (see Jijón y Caamaño op. cit., p.82, figs., 4, 5; p.133, fig. 97). The "eye" motif could belong to either period, for it also occurs in black on Ichimay sherds (fig. LIV b) which fall in both periods.

Red Slip with Modelled DecorationFigure LII g - iFigure LIII aA. Description

This group includes a variety of protuberances made by pushing outwards with a stick from the vessel interior while the clay was plastic. Fig. LII g shows what is probably a snake motif bordered above and below by a row of protuberances that are smaller than the ones mentioned previously for form VIIA vessels (cf. fig. XXX a, d). Another much larger protuberance is illustrated in fig. LII i. This may be part of a hand and the small incisions may represent fingers. There is another kind of protuberance (fig. LII h) that is modelled from the vessel exterior and projects out more than the others. It is always found with a small depression in the centre. Finally, fig. LIII a shows a small "eye", probably stamped into a shallow depression. This form of decoration is often found on Black Ware flasks or double chambered vessels that simulate potatoes (cf. fig. LXXXVII b, n).

B. Relationships

The design with the snake and protuberances is clearly related to that found on form VIIA vessels. At present it has not been possible to find anything like the sherd illustrated in fig. LII i, although there are a few similar ones in the study area. The protuberance in fig. LII h may also be part of a large snake design, where a snake several centimetres wide is outlined by shallow grooves and its markings represented by these protuberances (cf. fig. LV b). Again this has not yet been recorded outside the study area except for a similar sherd from Pachacamac. The relationship of the small "eye" in fig. LIIIa is to Pachacamac

Black Ware (Uhle op. cit., plate 18, fig. 12).

C. Dating

Any depiction of the snake on Orange Ware jars does not date earlier than the LH for reasons previously discussed under forms I and VA. There is no reason to consider the sherds illustrated here any earlier. Uncertainty as to what is represented on the sherd illustrated in fig. LII i makes its dating problematical. The similarity of the "eye" design to the one on Black Ware vessels makes an LH date certain, because such vessels are all LH.

Red Slip with Modelled and White Painted Decoration

Figure LIII b - j

A. Description

The majority of these decorated sherds are probably variations of the snake design (fig. LIII b - f). Two others may be part of face-neck jars (fig. LIII i and j). With regard to the first group, the one illustrated in fig. LIII b is the usual modelled snake found on forms VA and VIIA and is decorated with white blobs to simulate markings. The sherds illustrated in fig. LIII c and e are similar to one discussed in the previous section, that is, with protuberances to simulate snake markings, although this time the snake is outlined by shallow grooves painted white. Fig. LIII d and f are similar, both being perhaps elongated bean-shapes that represent a stylised snake. One is white painted and has vertical incised grooves. The other is red, but outlined by white stripes, as well as having white-painted vertical grooves.

Fig. LIII i and j both show shallow grooves on a red background. These may represent the fingers on a hand modelled on the body of a face-neck jar. The sherd illustrated in fig. LIII h occurs in a few of the Huaycán sector sites. It may come from a form XI or XII jar. The decoration is executed by shallow incisions that form concentric circles in the upper part of the vessel and possible rectangles in the lower half. These grooves are painted white on the red-slipped background. The sherd illustrated in fig. LIII g, with its two protuberances close together, is unlike anything else and it is impossible to ascertain the kind of jar it came from.

B. Relationships

To the best of my knowledge none of these sherds has counterparts elsewhere in the valley or in neighbouring valleys, with the one exception of the sherd illustrated in fig. LIII c, which comes from Pachacamac. This is not to say that similar sherds do not exist, but they have not been deemed worthy of attention. The small conical protuberances in fig. LIII g bear some resemblance to those on the Cuzco-style lidded ollas, but these have no white decoration (cf. Pardo 1957, lámina 5, fig. a).

C. Dating

There is not sufficient information to date sherds g - i with any accuracy. They could belong either in the latter part of the LIP or the LH. If I am correct in identifying the others as variations on the snake theme, then they are likely to date to the LH.

Miscellaneous Modelled DecorationFigure LII jFigure LVI bA. Description

There are two pieces in this category. The first is a small, appliqué sea bird from a vessel body, with its tail, wing feathers and eye represented by incisions (fig. LVI b). There is also a small modelled frog in poor condition (fig. LII j). These are known to occur on the edge of bowls and jars, for in the Uhle collections there is a form VIIB jar from Gravefield I (catalogue number 27300 (1894)) with a small frog placed at handle height on opposite sides of the vessel.

B. Relationships

The bird can be related to bird figures on bowl exteriors from Pachacamac (Uhle collections, catalogue number 31839 (2818)), and to small jars with white birds painted on them from Maranga (Jijón y Caamaño, op. cit., p.113, fig. 80). The frog has been found at Pachacamac and as far north as Puente Piedra in the Chillón (E.J. McDougale, personal communication, 1969). It is also found on Black Ware bowls (fig. XCII f).

C. Dating

The bird is probably LH because there is no representational decoration in the study area during the LIP, whereas modelled birds are found on Black Ware in the LH (fig. XCII e). The painted example from Maranga mentioned above comes from the LH cemetery in Huaca I. The frog may well be earlier. McDougale could only find them in LH contexts on the coast, but the fact that one occurs on a form VIIB vessel, dated as LIP, suggests they occurred in that period as well.

Red Slip with a Black and White DesignFigure LIV a - iA. Description

Most of these sherds belong within the Ichimay style as defined by Bueno (1978b, p.68; 1979 ms) and are probably parts of designs on the body of face-neck jars. The design area is typically painted white and outlined in black and may have further detail in black within the white area. The shapes are varied, from oval to zigzags, and should be compared with Uhle's face-neck and zoomorphic jars from Pachacamac, both LH and LIP (op. cit., plate 8, fig. 2; plate 7, figs. 4, 5; plate 13, figs. 5 - 7). Fig. LIV a shows a white band just below the jar neck with a double black zigzag line interspersed with black dots. Fig. LIV b shows a design similar to that of fig. LII f, but this time the rectangular white panel is outlined in black, as are the "eyes". The sherd in fig. LIV c is unique, with its spiral designs in black on white.

B. Relationships

There are some sherds with similar designs from downvalley sites, but none from upvalley. The designs on the sherds illustrated in fig. LIV d - i have no recorded counterparts elsewhere except at Pachacamac, as has been discussed (see also Strong and Corbett, 1943, fig. 12 d-f). They do not resemble anything on Chancay Black on White, or Chancay Black, White and Red vessels. In this respect they should be compared with designs illustrated in Strong 1925 plates 42; 43 a-h; Kroeber 1926, plates 80 - 82; Lothrop 1957, plates I - VII; and any jar from Maranga illustrated by Jijón y Caamaño. They do, however, bear

some resemblance to sherds from Chilca illustrated by Bonavía (1959, láminas IV q; X), where there are angular and circular white zones outlined in black and sometimes filled with small black lines. However some Chilca sherds have four colours (a yellowish-orange as well as red, black and white), which is not characteristic of the Lurín. A spiral design is found on some sherds in the Cuzco style in the Lurín (fig. LXII d, e) and also in Chilca (Bonavía op. cit., lámina iv m), where it is executed in black on a white band painted near the neck of certain jars and bowls. Finally, the zigzag lines with the dots constitute a design dating back to the MH in several areas, although in that period it was incised rather than painted. It can be found on the neck or shoulder of vessels from Ancón, Maranga and Pachacamac. (See for example, Reiss and Stübel 1880/87, plates 99, fig. 13; 96, fig. 18. Strong 1925, plate 47 j., Jijón y Caamaño, op cit., p.58, fig. 37; p.109, fig. 75, Uhle Pachacamac collections catalogue number 27298 (1892)).

C. Dating

The fact that similar sherds are found in Inca levels of Strong and Corbett's excavation places the Ichimay style in the LH. However, it is not certain how far back it goes into the LIP. Bueno (1978b, p.68; 1979 ms) defines an Ichimay style that consists of black, white on red and white on red decoration. It lasted from 1200 to 1533, but his description is merely an outline and the only accompanying photos are of two face-neck jar fragments. In the study area it has not yet been found isolated from the Cuzco style, either in excavations or in site sectors. In fact Uhle's excavations in front of the Temple of Pachacamac are the only place where it can be isolated from the Cuzco style

(op. cit., plate 8, figs. 2-4, 6). Stylistically speaking, it is possible to assign certain face-neck jars to the LH because they incorporate Cuzco designs. For example, the jar illustrated by Uhle (op. cit., plate 13, fig. 6) has the Cuzco lattice A design across its wrists. The fragment illustrated by Strong and Corbett (op. cit., fig. 12 c) has a weeping eye indicated by the fern design.

Support for an LIP date for some of the designs is given by the fact that Bonavía (op. cit., pp.166-167) considers that most of his decorated sherds from Puerto Viejo belong to the LIP. If the style does originate then, 1200 A.D. seems a reasonable estimate, if one considers that the Red, Black and White geometric styles and what Uhle terms "Epigonal" were in vogue during the early part of the period. However, until each of these styles is clearly defined in relation to one another and some absolute dates are obtained, their time span remains hypothetical.

Modelled Sherds with Red, White and Black Designs

Figure LV
Figure LVI c - d

A. Description

These sherds, like those of the previous category, appear to come from anthropomorphic or zoomorphic jars. Different snakes are illustrated in figs. LV b and c. In the former the snake is modelled on a jar of unknown shape and proportions, painted black and covered with protuberances to represent markings. In the latter the vessel takes the form of a curved snake painted a very dark maroon red, with a double white zigzag

stripe running along its body. The sherds in figs. LV d - f and LVI d all represent hands and feet of various beings. These have been modelled in low relief and grooves used to show fingers or toes. Small protuberances or nubbins, such as in figs. LV g and h, could be painted with features or black and white circles. The only two problematical representations are shown in figs. LV a and LVI c. All decoration was unburnished and the white was applied before the black outline and filler.

B. Relationships

There are no specific resemblances between the sherds illustrated in fig. LV and vessels excavated by Uhle from the front of the Temple of Pachacamac. The former are closer to the "Inca Associated" of Strong and Corbett (op. cit., fig. 12 c - f). There are few modelled pieces from Chilca, except for face-neck jar rims already cited. To the north of the Lurín there is nothing similar from Maranga nor from Fundo Pando. Stumer (op. cit., p.226) states that he found sherds similar to Strong and Corbett's "Inca Associated" in the Rimac valley, but does not illustrate these. At Ancón there is no similarity between the Lurín sherds and late LIP vessels illustrated by Strong (1925, plates 42; 43 a - h), which resemble Chancay Black on White vessels. Indeed Bueno (1979 ms, pp.14-15) believes any resemblances between Chancay and Ichimay styles to be misleading, since they are two separate styles.

C. Dating

The same comments apply to these modelled sherds as to those in the previous category. It should be noted that they come from

large sites all over the study area, rather than from Pachacamac. But their elaborate decoration, at least for the Lurín, places them in the LH, particularly those with the snake design. One or two could be earlier, but at present there is no way of proving this.

Handles, Bases and Appendages

<u>Total Sample - 254</u>	<u>Figure XXXVIII i</u>
	<u>Figure XLVII i - l</u>
	<u>Figure LVI e - h</u>

A. Description

Mention has already been made in passing of certain types of handles and bases illustrated in the above-mentioned figures. Loop handles (fig. XLVII i) are always undecorated and range in width between 1.05 and 4.25 cms. These are extreme measurements since the average width is 1.75 cms. One example from site 109 has a projecting nubbin (fig. XLVII k). Strap handles are usually vertical, although there are a few horizontal ones. They vary from 1.40 to 4.65 cms in width, the average being 2 cms. They can be plain (fig. XLVII j); decorated with a white band encircling the entire base, with white horizontal stripes around the handle itself (fig. XLVII l); or with a white band encircling each end of the base.

There are also other projections that vary in size and were used as ornamental nubbins. The small appendage illustrated in fig. LVI e possibly projected from the jar shoulder. The "smiling" face in fig. XXXVIII i was probably similarly placed.

Jar or bowl bases are rare amongst sherds in surface collections

and excavations. The one type of base that cannot yet be associated with a particular jar/bowl form is the ring base (fig. XLVII m). There are few examples and most of these, with one exception from site 84, come from the Huaycán sector. The base interior is slightly rough, which suggests that it was not a bowl. There is also a small leg support in fig. LVI h, which is different from the Cuzco-related ones (cf. fig. LXXX i - k).

B. Relationships

The white on red strap handles are known from Maranga and other sites in the Rimac valley (Stumer op. cit., p.231; Jijón y Caamaño op. cit., p.52, fig. 55, and p.106, fig. 70). The loop handles are found on many vessels in the Bandelier collections, such as forms VB ii and VIIB, and on some of the unillustrated vessels in the Uhle Pachacamac collections. They also seem to occur on certain vessels from Huaca III at Maranga (Jijón y Caamaño op. cit., p.55, fig. 33; p.59, fig. 39 - these identifications are tentative because of the poor photographs). Small projections, such as the one fig. LVI e, are found at Chilca (Bonavía op. cit., lámina VIII, fig. 7 c, d), and in Cañete (Kroeber 1937, plate LXXXIII, figs. 8, 9). There are conical tripod supports in the Teatino style and among sherds from the upper Rimac valley, although they are longer than the one illustrated here (Bonavía 1961, lámina II b, fig. A-10; Milla Villena 1974/75, lámina V, tipos 8, 9). Ring bases from Ancón and Maranga tend to be higher than the ones found in the Lurín (Jijón y Caamaño op. cit., p.333, fig. 29; Strong 1925, plate 42 e). The same comment applies to LIP vessels from Pachacamac (Uhle op. cit., plate 8, figs. 8, 10). Ring bases are not

found in any LH excavations at Pachacamac, for Corbett does not illustrate any in his study of plainware pottery from cut 1 of the Temple of the Sun excavations (Corbett 1941 ms).

C. Dating

All these features can be dated to the LIP with the exception of the white on red handles, which belong to the LH as well. None of the features (except the handles mentioned) is found in any of the excavations into LH materials, either at Pachacamac or elsewhere in the study area. On the other hand, all of them through the relationships discussed above occur elsewhere on vessels that come from late MH or LIP contexts, such as the Teatino and Late Cañete styles.

THE CUZCO STYLE

Stylistic and technological analyses of Cuzco pottery have been minimal, in spite of its ubiquity in the Andes during the LH. There are some general summaries (Rowe 1944; Pardo 1957, tomo II) that describe the style for the Cuzco region (here termed Imperial Cuzco), but these do not give the complete range of pastes, shapes, sizes and decoration, nor do they define the limits of Imperial Cuzco, i.e. whether it should include only vessels from the city itself, or from the city and outlying towns such as Pisac, etc., Menzel's recent publications (1966, 1976, 1977) provide some analysis of the Provincial Cuzco style, i.e. vessels found outside the modern eponymous department. She alone has made distinctions between the Imperial and the Provincial styles (1976, pp.67-68), whereas other authors have merely described and/or illustrated provincial vessels. A summary of these can be found in Strong and Corbett (1943, p.50).

The present study considers this kind of pottery a style rather than a ware because it is found on at least two different pastes: an orange-fired paste and a buff-fired paste. From Pachacamac to the Huaycán sector of the study area the paste used for the Cuzco style is similar to that of Orange Ware with some slight variations. For example, large aryballi found in Strong and Corbett's Pachacamac excavation are invariably made from a coarser-textured paste than that of the normal Orange Ware, whereas the small, decorated and highly burnished plates are made from a finer-textured paste with few visible inclusions. Another difference from Orange Ware is that all vessels in the Cuzco style are burnished on the exterior, and on the interior as well for bowls

and plates. Upvalley from site 84 to beyond Antioquía the Cuzco style is found on a buff to light orange-fired paste with visible inclusions of tiny red and black particles. This paste is used only for the Cuzco style and is not found in any period before the LH.

Coiling was the usual method of manufacture for jars, although the necks of very small ones (fig. LXXXII m, n) were probably modelled around a piece of cane. The aryballus was the most complex silhouette. Very large ones of a metre in height were probably made in several stages, with a drying period between each stage, in order to prevent the collapse of plastic clay. Small two-handled dishes were probably modelled from a single lump of clay, as are modern vessels from Santo Domingo de los Olleros. Plates and bowls were probably modelled over a form or a gourd, and a flat base made by scraping off the excess clay. Appendages such as nubbins, lugs and handles (figs. LXIX e, f, i, j; LXXIV f - m; LXXVII a - d) were modelled separately and then attached to the vessel. Some very fancy pieces related to the style (fig. LXXXVI a, d, e, f) may have been moulded.

In general the shapes found in the Lurín are the same as those of the Imperial Cuzco style, as described by Rowe and by Pardo (Rowe op. cit., pp.43-50; Pardo op. cit., pp.541-596). There does, however, seem to be less variety in shape and the kero form is entirely absent. On the other hand there are shapes, such as the flat-bottomed bowls (fig. LXXXIV) that have no Imperial Cuzco counterpart. It is harder to assess differences in vessel proportion between areas, because of the lack of complete vessels in the Lurín and the impossibility of reconstructing one from Strong and Corbett's excavation, owing to their having

discarded so many sherds. Table 38 gives the range in rim diameter and vessel height for the various Imperial Cuzco shapes. In the ensuing discussion it will be seen that the Lurín vessels fall within the appropriate range for rim diameters and therefore it is likely that the heights and general proportions were similar.

To the best of my knowledge there are no non-Cuzco designs on Cuzco forms in the valley, but there are Cuzco designs or adaptations of these on new Provincial Cuzco forms, such as the bowls in fig. LXXXIV and the alligator in fig. LXXXVI a. It is also interesting that the aryballus dominates all other forms, both in the valley and at Pachacamac. Other forms are not common in the study area and the small number of plates there contrasts noticeably with the large number found at Pachacamac (see charts I - III).

The orange-fired paste has already been described in the section on Orange Ware. The buff-fired paste has a compact, even texture and visible inclusions which range in diameter from 0.20 mm to 1.0 mm and on rare occasions reach 3.0 mm. Microscopic examination shows them to be rounded and that they take up about 50% of the surface area. The smaller vessels, however, have a finer-textured paste and the particles are less dense. Sherd breaks are even, compared with those of Orange Ware, but still fairly rough to the touch.

Sherds vary in thickness according to the part of the vessel they come from, the bases of aryballi being as much as 2 cms thick. The size of the vessel also affects sherd thickness. This can be seen with aryballi whose vessel walls can be as much as 1 cm thick if the vessel is 1 m high. However, most of the small aryballi

in the study area have walls ranging from 0.40 to 0.50 cms thick. The walls of two-handled dishes vary between 0.45 and 0.55 cms; and those of plates average 0.50 cms, although they are thicker at the base. The miniature jars (fig. LXXXIII i - k) have walls about 0.30 cms thick, but the rims are usually from 0.50 to 0.60 cms.

Surface treatment varies according to vessel shape. The very small jars, particularly those slipped a dark red, possess a neatly scraped interior with very even lines, similar to a picture in Shepard (1954, p.189, fig. 13 c - right hand side). The scraping was probably executed with a hard object (fig. XCIX f) while the clay was still plastic. Other jar interiors have a rougher interior surface and were probably scraped while the clay was leather hard (cf. Shepard, *ibidem*, fig. 13 d). One crudely made aryballus from the Panquilma excavation shows finger imprints on the interior. Jar exteriors were smoothed, slipped and burnished, probably with a pebble polisher (fig. CI c), to give a glossy appearance. The direction of smoothing tracks varies. On the rim exterior of aryballi it was usually vertical, but on jar bodies it was horizontal or diagonal. In many cases the tracks are no longer visible. All Cuzco-style vessels were burnished to a high degree. In fact Menzel (1976, pp.67-68) states that in the Imperial Cuzco style the surface was burnished after the application of each pigment so that each pigment stands out, but it is not yet certain that this was done in the Lurín. There is less burnish on the pedestal base ollas and on some crudely made jars (fig. LXXXV e), although their surface is well smoothed, much more so than for Orange Ware forms.

Sherds from bowls or two-handled dishes can always be distinguished from those of pedestal base ollas by the burnishing

on the interior surface, although this is less for the dishes than for the bowls, which can carry interior decoration (fig. LXXXIV f). The dishes are unslipped on the interior except for the rim, which is usually painted red. Plates on the other hand are highly burnished on the interior, and unslipped and less burnished on the exterior, where the smoothing tracks are usually visible.

The slip colours are red, black, white and a rare orange. The two most common are red and white. Although Menzel distinguishes a red and a maroon purple for Imperial and Provincial Cuzco styles in the Ica valley (Menzel op. cit., pp.148-149), the latter is akin to the brownish-black used for outlining and other decoration and has been considered as such here. The red in the Lurin varies from a dark, almost maroon red (Munsell 10R 3/2 to 3/6) to a brighter, cherry colour (Munsell 10R 4/4 - 4/8). Both are used in the same contexts and only rarely contrast with a vermilion orange (see fig. LXVII g for an example). Only at Pachacamac does this red have a silvery sheen, which is particularly noticeable on plain, red-slipped rims. Menzel has referred to this kind of paint as specular haematite, and it is also found on provincial Inca pottery in the Ica valley, although perhaps with a darker value than it has at Pachacamac, since she refers to it as a blackish-purple colour (Menzel op. cit., pp.91, 149). Not every red-slipped vessel at Pachacamac exhibits this iridescent quality and the slip may be related to the one used to produce Pachacamac Black Ware (Muelle 1954, p.189). The white varies in colour from Munsell 10YR 8/3 to 8/4. It is fairly chalky in appearance and never yellow.

Black also varies from a maroon purple to a grey black: Munsell 10R 2.5/1 to 2.5YR N2.5/0 or 5YR 2.5/1 to 2. The very dark purple comes close in both hue and value to the black, which leads me to think that both pigments have similar minerals and that a double firing, or a differential firing, would bring about both red and black pigments. Support for this view is found, firstly, in the refiring of some Black Ware sherds. When they were fired at a temperature of 800^o C, some showed a red slip on being removed from the kiln. Secondly, Muelle (*ibidem*) in his discussion of the origin of Chimú Black Ware states that the firing of red haematite painted vessels in a reducing atmosphere gives them a metallic black sheen. Finally, Rivera Dorado (1976, p.34) in his discussion of the Chinchero Inca pottery, suggests that there were two firings, the first at a higher and the second at a lower temperature. This is because X-ray diffraction and electronic microscopy have shown that the minerals in the slip pigments underwent less transformation than those of the sherd core.

The orange pigment is not very common and used only in a few pieces from Avillay and Pachacamac. It varies from a vermilion red to a true orange, Munsell 2.5YR 3/6, 4/6 - 8 and 5/6 - 8. On one plate at Pachacamac it has a very light value indeed (Munsell 2.5YR 6/8). It is used on vessels related to Urcusuyu polychrome (Rowe *op. cit.*, p.49) and is possibly related to Nasca-Inca pottery, since Menzel (*op. cit.*, p.164) mentions a similar colour for Nasca-Inca decoration at Ica.

The order of the pigments is always white first (although this may be so thickly covered with red and black that its primacy is not obvious), then red and/or orange and finally black.

Sometimes, as in Cuzco polychrome A (Rowe op. cit., p.47), the red and black are painted on an unslipped surface. In Qoripata polychrome, of which there are some examples in the study area and Pachacamac, the dark red ground is first and then the black decoration, while the white dots and blobs are postfired, for they are easily rubbed away. In this respect it is interesting to note two ways of achieving the exterior rim/neck decoration shown in fig. LVIII c and d. Both of these methods are found at Avillay. In one case white was the ground colour and thick black horizontal bands were painted over it to leave narrow white stripes in between, these latter giving the impression of being painted over the black. The other method is to slip the neck black and to paint narrow white stripes over this after firing.

The firing was even and well-controlled to give a uniform colour at the core and the surface. The colour of the fired paste ranges from 7.5YR 7/4 to 7/6 for the buff sherds and 5YR 6/6 for the more orange ones, which occasionally reach 2.5YR 5/6. There is rarely a grey streak through the core interior and, if this occurs, it is very light in colour. Only occasionally does one find a greyish surface patch on a sherd of the buff paste. It is also interesting that the buff-fired paste never shows any signs of vitrification, whereas the orange paste decorated in the Cuzco style at Pachacamac does exhibit traces. There is one sherd from a two-handled dish in Strong and Corbett's excavation that is covered with green glass spots.

Only one or two of the sherds examined in this study may have been manufactured in Cuzco itself. This hypothesis is based on their waxy appearance and feel, together with their high gloss, all of which make them similar to certain Qoripata polychrome sherds

from Cuzco. The break on the possible Imperial sherds is neat and straight, unlike that on most Cuzco-style sherds in the valley. Such differences between Imperial and Provincial Cuzco-style sherds correspond in part to those listed by Menzel (*op. cit.*, pp.66-77) for Ica, where highland vessels have a glossier finish and a duskier appearance.

Because of the lack of imported ware and the fact that different pastes were used for this style, it is inferred that there were at least two centres of manufacture in the valley, possibly more, given the idiosyncrasies one finds at certain sites, such as the square bowl at Panquilma (fig. LXXXV c), the unusual jar from site 84 (fig. LXXXIII f), and the alligator effigy from Avillay (fig. LXXXVI a). Yet although scraping, burnishing and painting tools have been found (figs. XCIX f, g; CI c; CIII d), there is no indication at any site as to how or where these vessels were fired.

With regard to vessel function, it seems likely that most were manufactured for ritual and burial purposes rather than for storage or cooking. In the valley there is no large aryballus, 1 metre high, as there is at Pachacamac, for the majority are medium-sized, between 30 and 60 cms high. Neither are there undecorated aryballi, as at Huánuco Pampa (C. Morris, personal communication, 1979), with the possible exception of the related Brown Ware form V. All Cuzco shapes are decorated in the study area, and none shows traces of soot from having been used over a fire. Any sooting on Cuzco-style sherds comes from fires that occurred after vessel breakage, since the soot covers the breaks. Furthermore, many of the whole decorated Cuzco vessels of known provenance in both coast and highlands come from burials. (See

for example, Bingham 1932; Uhle 1903; the Kroeber and Strong analyses cited in the bibliography of Uhle's excavations at coastal sites).

TABLE 38SIZE VARIATION FOR CUZCO POLYCHROME VESSELS

<u>Author</u>	<u>Total No. of vessels for which measurements taken</u>	<u>Range in rim diameter in cms</u>	<u>Range in height in cms</u>
<u>I Aryballi</u>			
Bingham (a)	465	4 - 30 +	13 - 90 +
Bingham (b)	64	8 - 30	24 - 90
Valcárcel	16	1.3 - 16.5	3.2 - 48
Llanos	8	3.7 - 32	8.8 - 90
Pardo	12	1.5 - 35	5 - 104
Menzel (I)	1	32	93
Menzel (P)	7	5.2 - 13.6	13 - 47.5
<u>II Two-Handled Dishes</u>			
Bingham (a)	271	not given	5 - 15
Bingham (b)	5	12.5 - 18	3 - 13
Valcárcel	16	6 - 15	5.3 - 18.5
Llanos	1	10.4	5.8
Pardo	4	7 - 14	1.6 - 15
Menzel (I)	1	13	5.5
Menzel (P)	2	9.6 - 11.2	5.5 - 5.8
<u>III Plates</u>			
Bingham (a)	300	16	3.5
Bingham (b)	9	12 - 16.5	3 - 5
Valcárcel	49	7 - 23	1.4 - 3.3
Llanos	16	8 - 21.5	1.7 - 3
Pardo	4	5 - 18.5	1 - 5.5
Menzel (I)	3	9.60 - 16	1.60 - 3.1
Menzel (P)	5	12.2 - 18.5	3.20 - 4.5

TABLE 38 (cont.)

<u>Author</u>	<u>Total No. of vessels for which measurements taken</u>	<u>Range in rim diameter in cms</u>	<u>Range in height in cms</u>
<u>IVA Pedestal Base Ollas - (pot)</u>			
Bingham (a)	200	not given	9 - 43
Bingham (b)	3	11 - 20 +	
Valcárcel	16	6 - 15	5.3 - 18.5
Llanos	4	5.3 - 8.1	7.7 - 10.8
Pardo	1	14	20
Menzel (I)	1	7.4	10.4
Menzel (P)	4	8.8 - 12	5.2 - 16.5
<u>IVB Pedestal Base Ollas - (lid)</u>			
Bingham (a)		10 - 18	-
Bingham (b)	3	10.5 - 18	-
Llanos	1	8.6	-
Pardo	1	12.5	-
Menzel (P)	1	10	-
<u>V Jars - group A</u>			
Bingham (a)	78	-	17 - 49
Bingham (b)		-	28 - 51
Valcárcel	3	6.5 - 11.60	8 - 15
Pardo	1	38	55
Menzel (P)	2	9.60 - 10	12.50
<u>VI Jars - group B</u>			
Bingham (a)	73	-	7 - 23
Bingham (b)	3	-	7.5 - 12.5
Valcárcel	8	3.3 - 6.5	8.6 - 13
Pardo	1	6	12

NOTES TO TABLE 38

1. The table includes pedestal base ollas although, strictly speaking, these are not polychrome.
2. Bingham (a) refers to his 1915 publication. Bingham (b) refers to his 1930 publication.
3. Menzel (I) refers to her measurements of vessels from the Cuzco region. She calls these Imperial Inca. Menzel (P) refers to her measurements of Provincial Inca vessels from Ica (Menzel 1976).
4. Other relevant publications are Pardo 1957; Llanos 1936; Valcárcel 1935.
5. It is possible to calculate the height of an aryballus from the measurements given here for complete vessels, given the consistent proportions that it exhibits. The height is roughly three times the rim diameter with a margin of error of 5 cms either way. This has enabled me to estimate the height of aryballi in the study area from the rim diameters. Samples for other vessels are smaller and therefore no formulas have been attempted.
6. My nomenclature for standard Cuzco forms differs from that of other authors, as can be seen from the following list:-

<u>This study</u>	<u>Rowe (1944)</u>	<u>Pardo (1957)</u>	<u>Bingham (1915, 1932)</u>
Aryballus	shape a	arfbalo, maka	shape 1
Two-handled dish	shape f	olla cilíndrica manca	shape 4
Plate	shape g	pucu	shape 11
Pedestal Base Olla	shape j	chullan chaki manca	shapes 2 and 3
Jars group A	shape b	racjchi	shape 6 a - c
Jars group B	shape d	aisana	shape 13 a, c, h.

The Cuzco style - the aryballus

Sample - 1041¹
 (254 rims, 787
 body sherds)

Figures LVII - LXX

A. Description

1. This is a very common form.
2. It is found in all sectors of the study area and at Pachacamac, but it is particularly noticeable at sites in the Sisicaya sector.
3. There are 401 sherds from surface collections and 640 from excavations. Of the latter, 33 come from Panquilma and 270 from Avillay. At Pachacamac ten come from Patterson's excavation and 327 from Strong and Corbett's.
4. There is one nearly complete specimen from the valley (fig. LVII a). Its contours follow those of aryballi illustrated by Rowe (1944, plate V), except that the neck is shorter and the nubbin is not centred over the middle red band. Neither does it project out as far as those on Imperial vessels. This jar, however, is a single specimen and from an examination of sherds it is obvious that there were vessels that reproduced the Cuzco proportions almost exactly.
5. The rim form for the aryballus is well known and Lurin examples are illustrated in figs. LVII - LIX. It should be noted that some rims show a markedly concave exterior with a flare that begins low on the neck (fig. LVIII g), whereas others are closer to the Imperial rim, where the flare comes higher on the neck (fig. LVII b). Menzel has noted that the former trait is characteristic of Provincial aryballi at Ica (op. cit., p.69).
6. In both the study area and at Pachacamac the lip is flattened, (fig. LVII c, f, g, i, j), but it is also rounded

(fig. LVII b, e, h, k), although this seems rare at Pachacamac.

- 7a. In the study area the rim diameters range from 6 to 24 cms and at Pachacamac from 12 to 32 cms. In both areas the majority of rims are between 12 and 18 cms, which would give most vessels a height from 36 to 54 cms, putting them in Pardo's medium category (1957, Tomo II, p.542).
- 7b. It was not possible to obtain enough measurements for this.
8. Handles vary in width from 0.90 to 4.50 cms. They are usually unslipped (fig. LXIX e, f), or red (fig. LVII a).
9. The pointed base varies from being very pointed (fig. LXIX h), to slightly flattened (fig. LVII a), and very flattened for aryballi a metre or so high (fig. LXIX g). Bases are plain except for an occasional red or orange band just below the carination.
10. Slips have already been discussed in the general summary. White is the usual base colour, although the design may be placed on an unslipped surface, as on polychrome A vessels (Rowe op. cit., p.47). The design pigments are red and black with a rare orange. The design areas, excluding rim and handles, are as follows:-
 - i) A series of vertical bands and panels on one side of the jar, as in Cuzco Polychrome A and B. Some of the side panels may have a horizontally or diagonally executed design (figs. LX; LXI).
 - ii) A series of horizontal bands across one side of the jar. This is rare (possibly fig. LXII e, h).
 - iii) A single, large horizontal panel across one side of the jar (fig. LXIV d, f).

10. cont.

- iv) An overall naturalistic design. This is rare (fig. LXVII e - g).

11. The decorative possibilities for the aryballus in the Lurín (including Pachacamac) are as follows:-

a) for the rim:-

- i) A light red (fig. LVII a), or a dark red (fig. LVII b, e) exterior with a black stripe around the lip, with or without a red interior rim band.
- ii) A white exterior with a red interior rim band and a black lip (fig. LVII f, g), or with no rim band and a red lip (fig. LVII h, i).
- iii) A maroon/purple exterior with the same colour for the interior rim band and lip (fig. LVII j).
- iv) An unslipped exterior, sometimes with a red interior rim band that extends onto the lip (fig. LVII d).
- v) An orange-slipped exterior with a black lip but no interior rim band (fig. LVII l).
- vi) Black horizontal bands about 0.60 to 1 cm wide, painted on the natural buff colour of the fired paste, usually without the red interior rim band (fig. LVII k).
- vii) Black horizontal bands on a white-slipped exterior, with or without the red interior rim band (fig. LVII m, n).
- viii) Red horizontal bands on a white-slipped exterior, with or without the red interior rim band (not illustrated).
- ix) A white-slipped exterior with bands similar in width to the above and painted in red and black to give the sequence: red, black, white, black. There is the

11. a) ix) cont.

usual red interior rim band and black lip (fig. LVIII a).

- x) A red-slipped exterior with narrow white stripes between 0.20 and 0.30 cms thick, painted around the neck. There is a red interior rim band and a black stripe around the lip (fig. LVIII c, f).
- xi) A black-verging-on-maroon exterior with horizontal white stripes similar to those above, with or without the red interior rim band (fig. LVIII d, e).
- xii) A red-slipped exterior with a row of small black triangles pendant from the exterior lip, beneath which are bands of black diamonds separated by a double black stripe (fig. LVIII g).
- xiii) The same pattern as for xii) but the diamonds are painted on a white exterior (fig. LVIII h and fig. LIX b).
- xiv) The same pattern as for xiii) but broken by a red vertical band bordered by a double and a single black stripe and a lattice B border. The interior rim band is black (fig. LIX a).
- xv) A white-slipped exterior with a black interior rim band and small black triangles pendant from the lip (fig. LIX c).
- xvi) A white-slipped exterior with two bands of interlocking teeth, one in red and one in black, above the neck constriction. The bands are separated by a double black stripe (fig. LIX d).
- xvii) A white band around the upper neck. It is bordered on each side by a single black stripe and filled with

11. a) xvii) cont.

a lattice B design in red. Above this band the neck was slipped red (fig. LIX f).

xix) An exterior which is slipped half white and half red, with a black interior rim band that extends over onto the exterior. On the white part is an "eye" in black and red (fig. LIX g).

xx) A white-slipped exterior with rectangular spaces formed by double black stripes. There is a black dot in each of the two spaces visible (fig. LIX i).

xxi) A white slipped exterior with a black design set in an oval framed by a black band. The design consists of a black rectangle enclosing a series of black interlocking teeth. As with fig. LIX g, this may be part of an unusual face-neck jar (fig. LIX k).

xxii) A white slipped exterior with black solid circles painted on it (fig. LIX h).

xxiii) A face-neck with a fern design used to indicate tears from an eye. This is not illustrated here. The sherd comes from Strong and Corbett's Cut 1 at Pachacamac.

To the best of my knowledge the rims in fig. LXIX a, c, d - k are unique.

b) for the body:-

Fern Design

- i) The fern design in black executed on an unslipped surface (usually buff or orange) and springing from:-
- a double black centre stripe (fig. LX c, h);
 - a single black centre stripe (fig. LX d, i);
 - a double black stripe that frames a wavy line (fig. LX e).

11. b) ii) The fern design in black executed on a white-slipped surface (figs. LX g; LXI c), and springing from:-
- a double black centre stripe (fig. LX a);
 - a single black centre stripe (fig. LX f);
 - a black chain (fig. LX b).
- iii) The fern design executed in black on the natural buff surface with the solid circles in red (fig. LXI e).
- iv) One half of the fern design executed on a natural buff surface and springing from vertical red bands and vertical wavy line bands (fig. LXI a).
- v) The fern design (maybe only half) executed in black on a white-slipped surface and springing from a horizontal centre stripe or stripes, rather than the customary vertical ones (fig. LXI d).

The various combinations of the fern design with other design bands should be noted. There are two patterns for the back of the jars:- a) a rectangular frame with double wavy stripes executed diagonally and b) the fern design executed from a horizontal stripe or stripes (fig. LX h, i). There are numerous combinations of the fern design with different centre or side bands. It is combined with a lattice A and staggered lines in black on white (fig. LX g); with a lattice A in black and red on white (fig. LX f); with red vertical bands and bands of solid black triangles (fig. LX e); with lattice B in black on white (fig. LX c); with red vertical bands and black wavy stripes on buff (fig. LXI a); and with a series of vertical and horizontal staggered lines in black and red on white (fig. LXI b).

Solid triangles

11. b) vi) Single rows of solid black triangles executed on the unslipped orange surface with each row separated by a single black horizontal stripe (fig. LXI f, j); on a white-slipped surface (fig. LXII a, e); or separated by a double black stripe (fig. LXII b).
- vii) Double rows of solid black triangles executed on the unslipped orange surface, each pair being separated by a single black horizontal stripe (fig. LXI g).
- viii) Single rows of solid black triangles executed on a red slipped surface and each row separated by a single black horizontal stripe (fig. LXI h, i).

The various combinations of solid triangles with other designs are as follows:- with a vertical red band and a column of lattice B in red on white (fig. LXI h); with a double column of lattice B in black or red on white (figs. LXI i; LXII a); with black and white vertical stripes (figs. LXI j; LXII b); with black volutes (fig. LXII e); and with red volutes (fig. LXII d).

Solid black triangles may also be used like interlocking teeth, separated by a black zigzag. This unique vertical band is in fig. LXII c.

Solid diamonds

- ix) A white vertical band with a single column of black diamonds (fig. LXII j).
- x) Double white vertical bands separated by black stripes each containing a column of red diamonds (fig. LXII f); or one column of red and one column of black diamonds (fig. LXII g).

11. b) xi) A white horizontal band outlined by a double black stripe, containing a row of black diamonds with red dots in the intervening triangular spaces (fig. LXII h).
- xii) A horizontal red panel outlined with a double black stripe and containing at least three horizontal bands, two red, one white. In each band is a row of diamonds. The alternating rows are black diamonds outlined in white and red diamonds outlined in black (fig. LXII h).
- xiii) Diagonal white bands outlined in black, each containing a diagonal row of red diamonds (fig. LXIV b).

The various combinations of diamonds with other designs are as follows:- with white diagonal bands containing black squiggles (fig. LXIV b); with combinations of diagonally staggered lines (fig. LXII j); and with small black teeth and red dots (fig. LXII h).

Wavy lines

- xiv) A vertical band outlined on each side by a black stripe on the unslipped surface with a red wavy line inside (fig. LXIII f).
- xv) A vertical band outlined on each side by a double black stripe on the unslipped surface and containing two wavy lines, one red and one black (fig. LXIV c).
- xvi) White vertical bands bordered by red bands and each containing a thick red wavy line (fig. LXIII g).
- xvii) A white vertical band outlined with a black stripe on each side and containing a single black wavy line, (fig. LXIV a).

11. b) xviii) A white vertical panel outlined with a black stripe on each side and containing four wavy lines. The two centre ones are black and the outside ones are red (fig. LXIII i).

xix) Three black vertical stripes on white, bordered on each side by a red wavy line (fig. LXIII c).

xx) As above, but with two black stripes in the centre and with black dots painted along the curves (fig. LXIII d).

xxi) Narrow white vertical bands outlined with a black stripe on each side and containing red wavy lines (fig. LXIII e).

xxii) White diagonal bands outlined with a double red stripe on each side and containing diagonal black wavy lines (fig. LXIII j).

These lines are commonly combined with red vertical bands (figs. LXIII f, i, j; LXIV a, c). They are also used as part of the design for the back of an aryballus on the upper shoulder just below the neck. There is a double diagonal wavy line (fig. LX i); a series of horizontal wavy lines (fig. LXIII b); a vertical wavy line (fig. LXIII a); and a single diagonal wavy line (fig. LXIII h).

Chequers

xxiii) These designs are always executed on a horizontal panel placed on a red ground (fig. LXIV d, e) or a maroon/black ground (fig. LXIV f, g). The panel design may be executed on the unslipped surface (fig. LXIV d, f, g); or on a white one (fig. LXIV e).

11. b) xxiii) cont.

The design consists of a large zigzag band formed by three rows of tiny squares. The outer rows are black and the inner row is red. Black chequers on white or buff are also used as a filler for large triangles combined with vertical rows of concentric diamonds (fig. LXV a); or for large diamonds (fig. LXV c).

Concentric Diamonds and Triangles

- xxiv) A lattice-like pattern of large black diamonds on an unslipped orange surface. They are filled with black crosshatching (fig. LXIV h).
- xxv) Black and white concentric diamonds on the unslipped orange surface. There is a white dot in the centre (fig. LXIV j).
- xxvi) Black and red concentric diamonds on the unslipped buff surface (fig. LXVI e).
- xxvii) Black concentric diamonds on a red slipped surface with a black dot in the centre (figs. LXVI h; LXVII i); or a series of white dots (fig. LXLV g).
- xxviii) Black and red concentric diamonds on a white-slipped or a buff surface (figs. LXIV i, k; LXVI j). The centre diamond may be solid red or quartered into four triangles of alternating red and white (fig. LXVII i).
- xxix) Black concentric diamonds on white, with either a white centre diamond (fig. LXV a); a solid black centre diamond (fig. LXV b); or a black and white chequered centre diamond (fig. LXV c).

Concentric diamonds and/or triangles are combined with the following patterns:- with black and white chequers

in side triangles or in the centre diamond (fig. LXV a, c); with lattice B (figs. LXIV k; LXV b, c); with staggered lines and the small solid black triangles in horizontal rows (fig. LXV a); with solid black triangles in diagonal rows (fig. LXVI j); with a Maltese cross and fret (fig. LXV c); with vertical red bands (fig. LXVI e); and with concentric rectangles (fig. LXVI i).

Concentric Rectangles

These designs are found chiefly on large horizontal panels on the front of an aryballus slipped maroon/purple.

- xxx) The black on white panel framed in black and white stripes contains a red zigzag line bordered by white ones. The zigzag continues across the panel and in the intervening triangles are concentric red and white squares (figs. LXV e; LXVI a, d).
- xxxi) The same panel as above but a red diamond pattern bordered by white stripes. The red and white concentric rectangles are found in the centre of the diamonds as well as in the intervening triangles (figs. LXV d, f; LXVI i).
- xxxii) The centre panel is divided into large alternating black and red rectangles by a series of intersecting black and white lines. Within each rectangle is a series of small concentric red and white or black and white rectangles (fig. LXVI c).
- xxxiii) Red concentric rectangles on a white-slipped background with a central black dot (fig. LXVI b).
- xxxiv) A vertical panel of solid black diamonds on a white background with concentric red and white rectangles in each diamond (fig. LXVI f).

11. b) xxxiv) cont.

With the exception of sherds in fig. LXVI b - d, the rectangles are executed in the vermilion red/orange and white on a maroon/purple and black background. The only other design element combined with them is the vertical red band in fig. LXVI f, where the panel is vertical and not horizontal. They are also combined with a cactus design in fig. LXVII d.

Frets and Zigzags

- xxxv) A natural or orange-slipped surface with a large fret outlined in black. The fret can be white (fig. LXVI k), or red (fig. LXVII h).
- xxxvi) A horizontal white panel outlined in black stripes or a red band. The panel contains several narrow frets in black (fig. LXVII c), or red and black (fig. LXVII a).
- xxxvii) A horizontal white panel outlined with a red band containing a group of zigzag lines in black (fig. LXVII b).

Naturalistic

- xxxviii) A horizontal red panel outlined in black with a design of cacti and concentric rectangles in black and white (fig. LXVII d).
- xxxix) A design on the unslipped buff surface of the red ccantu flower with either curved (fig. LXVII f), or straight branches (fig. LXVII e).
- xl) A design of red and orange birds (humming birds?) outlined in black on a white background (fig. LXVII g).

Miscellaneous

11. b) xli) Small vertical bands framed by black stripes on the unslipped orange surface. Each band contains a ladder-like design of black, horizontal, evenly-spaced stripes (fig. LXVII j).
- xlai) A horizontal black band on a white-slipped surface. It contains hollow white circles. The black band is framed with red stripes (fig. LXVIII a).
- xliii) A combination of frets and dots. There are three horizontal bands on the upper jar shoulder. The uppermost is black with a white fret. The middle band is white with red dots. The lowest band is red with a black fret (fig. LXVIII b).
- xliv) A white slipped sherd with even vertical stripes of red and black, (fig. LXVIII d).
- xlvi) A white vertical band outlined in black, with a design of black interlocking triangles inside (fig. LXII c).

Lattice and Staggered Lines

- xlvi) Crosshatching is used principally as a filler in black on a red-slipped surface (fig. LXVIII e); black on a white-slipped surface (fig. LXVIII k); and black on an unslipped surface (fig. LXVIII j).
- xlvi) A simple lattice A design using double lines for the lattice in red on white (fig. LXVIII m); or a complex lattice using double lines in black on white (fig. LXVIII l); or using triple lines for the lattice in black on white (fig. LXIX b); or a simple lattice using double lines on the unslipped orange surface and framed by several black vertical stripes (fig. LXIX a).

11. b) xlviii) Crudely executed lattice B in black on white
 (fig. LXVIII h, i); or finely executed in black on
 red, with white dots in intervening triangles or
 diamonds (fig. LXVIII f); or the same but executed
 in black on unslipped buff with red dots (fig.
 LXVIII g).
- xlix) A rectangular lattice in black on red with white dots
 inside the rectangles (fig. LXVIII c).
- 1) The staggered lines can be executed in red on white
 (fig. LXIX c), or in black on white and frame a
 horizontal panel on all sides (fig. LXIX d).
 (Note that in fig. LXIX c the lines have been
 erroneously drawn in black instead of red.)
11. c) for nubbins:-
- There are fewer nubbins upvalley than there are at
 Pachacamac. The latter show a fair range of variation
 which has not been illustrated here. The eyes and
 mouth are incised and often painted. The possible
 colour combinations are:-
- i) A white face with black sides and black paint in the
 incisions for features (fig. LXIX i).
- ii) An all black face (fig. LXIX j); or with white paint
 in the incisions for features (not illustrated).
- iii) An all red face with features incised (not illustrated).
12. The aryballus is generally considered a storage vessel,
 particularly for liquids, and also for transporting these
 (Bingham 1930, p.124, fig. 79; Pardo 1957, p.560). Most of
 the specimens from the coast come from graves, although sherds

of large aryballi are found in refuse at south coast and highland administrative centres (Menzel 1976, p.68; Bingham 1930, p.127). At Huánuco Viejo, Morris found that 90% of the pottery associated with the state storage houses consists of sherds from the aryballus (Morris 1971, p.139). These jars are also consistently associated with stone floors and maize. However, they are all plainware and their rim diameters ranged from 10 cms to 48 cms with a mode from 26 to 28 cms, which makes them generally larger than the Lurín specimens (Morris 1967, table 10). At present there is no pattern to the architectural associations of aryballi in the Lurín, but their smaller size and their elaborate decoration suggest that they were used as grave goods and maybe for family storage of ceremonial maize and chicha, rather than for state storage.

B. Relationships

a) for the rims and necks:-

i/v) Jar necks of a single colour have been described elsewhere (Rowe 1944, p.47).

ix) Bingham 1930, p.121, fig. 73.

x/xi) Rowe 1944, plate V, figs. 1-3.

xii) Rowe 1944, plate V, fig. 4. Rivera 1976, p.48 fig. 80.

It is of interest that designs vi, vii, and viii are not, to my knowledge, found on Imperial Cuzco pottery. The design of bands in black or red on an unslipped or white surface may be a coastal phenomenon. On the basis of published photographs they look closest to LIP jar rims from Ica (Menzel 1976, plate 46, fig. 11). Designs xv to xxi are, for the present, unique to the Lurín.

It is also interesting that there are face-neck aryballi, rim no. xxiii, from Pachacamac and Cuzco (Pardo 1957, p.547, fig. 14), but to date none has been found in the study area.

b) for the body:-

- i/ii) Bingham 1930, p.126, fig. 81b; Pardo 1957, p.545 fig. 8. (In these the fern design springs from a single line.) Rowe 1944, plate V, fig. 1. (Here the fern design springs from a double line.) Rowe 1944, plate V, fig. 3; Bingham 1930, p.129, fig. 83; Llanos 1936, lámina I, 5/297. (Here the fern design springs from a chain.) Rivera 1976, p.65-67, figs. 103-105. (Here the fern design springs from all three kinds of stem).
- iii) Unique.
- iv) Rivera 1976, p.67, fig. 105 (uppermost right and lowest left drawings). Also p.54, fig. 88 (middle left).
- v) Pardo 1957, p.547, fig. 15; Valcárcel 1935, p.14, figs. 1/178 and 1/267.
- vi/viii) Bingham 1930, p.125, fig. 80c; Rivera 1976, p.47, fig. 79 (top left).
- vii) Rivera 1976, p.47, fig. 79.
- ix/xi I have not seen these designs on published illustrations
xiii) of aryballi. They can occur on two-handled dishes and the small jars that Pardo terms aisanas (Pardo 1957, lámina 2, p.567).
- xii) Bingham 1930, p.166, fig. 117b.
- xiv/xxii) Pardo 1957, p.547, fig. 12.
- xxiii) Llanos 1936, lámina V, 5/684.

b) cont.

- xxiv/xxix) Bingham 1930, p.121, fig.74; Rowe 1944, plate V, figs. 4 and 6; Pardo 1957, p.545, fig. 4; Uhle 1903, plate 18, fig. 1; Valcárcel 1935, p.14, fig. 1/268; Llanos 1936, lámina I, fig. 5/825. See also Bingham 1930, p.128, fig. 82 d and e for how concentric diamonds are combined with crosshatching and with chequers.
- xxx/xxxiv) Menzel 1976, plate 36, fig. 485.
- xxxv) Bingham 1930, fig. 81 c, p.126.
- xxxvi) Bingham 1930, p.166, fig. 117 c; Pardo 1957, fig.10, p.547; Rivera 1976, p.54, fig. 88 (top right).
- xxxvii) Bingham 1930, p.126, fig. 81 a; Pardo 1957, p.547, fig. 11.
- xxxviii) Unique.
- xxxix) Rivera 1976, p.73, fig. 110 (top right and bottom left).
- xl) There are other species of birds depicted on aryballi but not these. See, for example, Rivera 1976, p.78, fig. 113.
- xli/xlv) At present these appear unique.
- xlvi/1) Bingham illustrates two sherds with lattice A designs of differing proportions, 1930, p.125, fig. 80b and p.128, fig. 82c. He also illustrates its combination with the fern design, p.126, fig. 81b; p.129, figs. 84 and 93; p.166, fig. 116. It is also illustrated in combination with staggered lines and the fern design by Rivera 1976, p.66, fig. 104 and by Llanos 1936, lámina II, fig. 5/297. Lattice B is illustrated by Bingham, p.124, fig. 79, and by Rivera 1976, p.47, fig. 78. It is illustrated with interspersed dots by Llanos 1936, lámina VI, fig. 5/726.

c) for the nubbins:-

1/iii) Bingham illustrates a wide variety of these (1930 p.131, fig. 87), none of which exactly corresponds to those illustrated here, or to others from Pachacamac. Nubbins from Chinchero are closer in design (Rivera 1976, p.37, fig. 50), but it is likely that these elements are very much the result of the potter's whim.

C. Dating

LH.

NOTES

1. Rowe, 1944, p.48, states that "a whole jar can be confidently reconstructed from a single sherd." To a certain extent this is true, but most jar body sherds in this study have been assigned to the aryballus category because this is the dominant jar rim. It is possible that some belong to a "florero" type jar (Rowe shape h, Pardo Tticachurana), but at present there is no way of knowing this.

The Cuzco style - the two-handled dish

Sample - 177 sherds Figures LXX-LXXIV
 (108 rims, 69 body
 sherds)

A. Description

1. This is a common form although less important than the aryballus, even given the uneven sample sizes.
2. It is found in all sectors of the study area, particularly in surface collections from Chontay and Sisicaya. In the Huaycán sector it has only been found at Panquilma, mainly because of the excavation there. It is also found at Pachacamac.
3. There are 56 sherds from surface collections and 121 from excavations. Of the latter 74 come from Strong and Corbett's excavation, 39 from the Panquilma excavation and eight from the excavations at Avillay. There are none from Patterson's excavation.
4. Whole specimens are well known from the Cuzco area and there is an almost complete one from Pachacamac (fig. LXX a). The general contours followed those of Imperial Cuzco vessels, some being deep (fig. LXX c and fig. LXXI a), and some shallow (fig. LXXII h), (cf. Bingham 1930, p.118, figs. 4a - 4c). The vessel illustrated here had a height of about 9 cms, a rim diameter of 12 cms and a handle width of 1.65 cms.
5. The rim is a very short flare that projects outwards at a right angle, or a little over a right angle, to the vessel wall. The angle of the wall profile varies from the almost vertical to a sharp inward slant. This variation is consistent with Imperial Cuzco dishes from Chinchero (Rivera 1976, pp.51-55; p.64, fig. 99 - 100).

6. The shape of the lip varies from rounded (figs. LXXI c; LXXII a, b), to rounded and tapered (figs. LXX a, d, e; LXXII g; LXXIII b), and flattened (figs. LXX b, c; LXXI b; LXXIV c, e).
- 7a. In the study area rim diameters range from 8 to 21 cms and at Pachacamac from 12 to 22 cms. In both areas the majority of rims are between 12 and 18 cms. Vessel heights would seem to range from about 4.50 cms to well over 12 cms. These fall within the size range for Imperial Cuzco vessels, as given in Table 38.
- 7b. This varies from 0.20 to 0.90 cms. and averages 0.60 cms.
8. These are always horizontal. In the present samples there are no vertical ones as illustrated by Bingham (1930 p.118, figs. 4e, 5a). They are set from 1.50 to 2 cms from the neck exterior and vary in width between 1.50 and 2.90 cms. They are usually decorated in one of the lattice patterns (fig. LXXIV f - m).
9. Bases are always flat but uncommon in the present collections. Some had one corner point (fig. LXX c) and others two corner points (fig. LXXI a, and fig. LXXII h). Sometimes the base may be given a red slip (fig. LXX c).
10. The pigments used are red, black and white. The design area is usually a horizontal white panel outlined in black, on which the design is painted in red and black. The design on the panel is usually a horizontal one, although on occasions it may be vertical (Cf. fig. LXXII b and d with f).

11. The decorative possibilities for the two-handled dish in the Lurín are as follows:-

a) for the rim:-

- i) The rim interior is painted red with the rim exterior either white (figs. LXX a, c, e; LXXII f), or the natural buff or orange surface of the paste (figs. LXX b, ; LXXIII c).
- ii) As above, but with a black line around the lip. (figs. LXXI b; LXXII a, b).
- iii) The rim interior and exterior are unslipped, but the interior is decorated with a band of black triangles, their apex pointing inwards (fig. LXXIV a).

b) for the body:-

There is sometimes a circumferential black stripe placed just below the neck exterior (figs. LXX d, e, f; LXXIII a, b).

Huatanay Polychrome

- i) A white horizontal panel outlined in black (single or double lines) with a single row of diamonds inside it. These can be solid red (fig. LXX a, b), or solid black (fig. LXXI b, d).
- ii) A panel as above, with the diamonds hatched in red and outlined in black (fig. LXX d), or without the outline (fig. LXXI a).
- iii) A white panel as above, with a row of solid red diamonds outlined in black with black dots in between each diamond (fig. LXX f); or the same but without the diamonds being outlined (fig. LXXI f).

11. b) iv) A panel as above, but divided horizontally into two equal bands by one or two black stripes. There is a row of red diamonds in each band (figs. LXX c, e; LXXI e).
- v) Vertical white bands separated by black stripes and containing black diamonds outlined three times in red (fig. LXXI g).

The combinations of the diamond design with other elements should be noted. They occur with a zigzag line in white on red above the main panel (fig. LXXI e), and with a vertical red band (fig. LXXI g).

Zigzag Lines

- vi) A white panel outlined in black, in which rows of zigzag lines are painted in alternate black and red (fig. LXXI c).
- vii) A panel as above, with a red zigzag band outlined in black and white (fig. LXXII a).
- viii) A red horizontal panel with a white zigzag line outlined in black (fig. LXXII b).

Solid Triangles

- ix) A panel outlined in black on the unslipped orange surface of the vessel. It is further divided into two horizontally by a black stripe. In each band is a row of solid black triangles (fig. LXXII d).
- x) A white panel with at least four horizontal rows of triangles, the upper rows being black and the lower rows red. The triangles are separated by groups of black vertical stripes from three to six in number. Each row faces a different direction (fig. LXXII c).

11. b) cont.

Lattice and Staggered Lines

- xi) A white panel with a horizontal lattice A in black and red (fig. LXXII e).
- xii) An unslipped panel with staggered lines executed in black (fig. LXXIII b).

Frets, Vertical Stripes and Stepped Lines

- xiii) Pairs of vertical stripes extending downwards from a circumferential black stripe just below the neck, in black on the unslipped surface (fig. LXXIII d); or in red on white (fig. LXXII f).
- xiv) A white fret outlined in black on the unslipped buff or orange surface (figs. LXXII g; LXXIII a and possibly h).
- xv) A red fret on white (fig. LXXIII g).
- xvi) A vertical red band on buff (probably not part of a fret). It is found on the dish with the triangle design on the rim (fig. LXXIV a).
- xvii) A red panel divided into a series of rectangles by groups of three black stripes. A black stepped line runs diagonally within each rectangle (fig. LXXIII c).

Miscellaneous

- xviii) Panels in solid red outlined with double black stripes (figs. LXXII h; LXXIII f).
- xix) A variant of the fern design in black on the unslipped surface. It extends downwards from the black stripe just below the neck (fig. LXXIII e).

11. b) cont.

Circles

xx) A black horizontal band with white hollow circles painted on it (fig. LXXIV b, d, e). These may have a red instead of a black centre (fig. LXXIV c).

c) for the handles:-

i) Unslipped (fig. LXXII h).

ii) A red overall slip (fig. LXXIV j).

iii) A white background with black vertical stripes (figs. LXX a, e; LXXII e); or a combination of black stripes and bands (fig. LXXIV i).

iv) An unslipped background with vertical red stripes and black bands (fig. LXXIV l); or with red and white vertical bands outlined in black (fig. LXXII a).

v) Lattice A in black on an unslipped orange surface, (fig. LXXIV f, g); or in black and white on the same surface (fig. LXXIV h).

vi) Lattice B in black on a red background with white dots in the intervening triangles and diamonds (fig. LXXIV k).

vii) An unslipped background with double white vertical bands outlined in black stripes. There is a column of solid red diamonds in each band (fig. LXXIV m).

12. On the central and the south coast these vessels are found in graves (Uhle 1903, plate 18, fig. 3; Menzel 1976, plate 11, fig. 148; plate 17, fig. 204). Although they have been excavated from refuse in the Lurín valley, it is likely that this refuse comes from looted graves (see Appendix II).

In the highlands around Cuzco they are found both in graves

and in the city ruins (Bingham op. cit., p.156; Valcárcel 1935; Llanos 1936; Rivera 1976). At Huánuco in the central highlands, a plain two-handled dish (Morris's form 2) is associated with residential structures, and a decorated dish with a ceremonial structure (Morris 1967, fig. 11, pp.220-222). Both Bingham and Pardo feel it was used for the storing, transport and/or offering of food (Bingham, ibidem; Pardo op. cit., p.577). Since in the Lurín all specimens are decorated and appear to come from looted graves, it is likely that they served as a receptacle for food offerings to the dead.

B. Relationships

a) for the rims:-

i-iii) Almost every rim of these vessels has a red interior, as can be seen from the publications cited below in connection with decoration on the body. For iii) Bingham 1930, p.157, fig. 108 d shows a somewhat similar rim, although the triangles are executed on a red slip.

b) for the body:-

i) Bingham 1930, p.157, fig. 108 a; Valcárcel 1935, lámina V, 1/271 and lámina VI, 1/642, 1/183; Rivera 1976, p.64, figs. 99 and 100.

ii) Rivera 1976, p.64, fig. 99; Bingham 1930, p.157, fig. 108 b, f.

iii/iv) Not yet noted elsewhere.

v) Bingham 1930, p.159, fig. 109 d; Pardo 1957, p.571, lámina 4c. (Both these show single columns of black diamonds with no further outline).

B. b) v) cont.

Rivera 1976, p.52, fig. 86.

vi/viii) No vessel from elsewhere has yet been noted with zigzag lines as the main design element. They occur however in combination with panels of diamond designs. See Bingham 1930, p.159, fig. 109 f and Rivera 1976, p.51, fig. 85.

ix/x) Not yet noted from elsewhere.

xi) Bingham 1930, p.159, fig. 109 e; Llanos 1936, lámina IV, 5/336.

xii) Bingham 1930, p.157, fig. 108 d.

xiv) Possibly Rivera 1976 p.55, fig. 89.

xiii) Not yet noted from elsewhere.
xv/xix)

xx) Not yet noted from elsewhere. Menzel (1976, p.163; also plate 35, fig. 477; plate 33, fig. 430) mentions this design as being incorporated into the Inca-Inca design repertoire from use as a narrow black band in the Imperial Inca style. She cites an example from Bingham (1930, fig. 109 b), where it is used on a two-handled dish, but as an upper border for a large zigzag design filled with concentric squares. I have no knowledge of its use in Imperial Inca as the main design panel on a two-handled dish.

c) for the handles:-

i) Bingham 1930, p.157, fig. 108 a; Rivera 1976, p.51, fig. 85. (These are often found on Huatanay Polychrome vessels.)

ii) Rivera 1976, p.53, fig. 87 (bottom figure).

iii) Bingham 1930, p.157, fig. 108 d.

B. c) iv) Not yet noted from elsewhere.

v) Bingham 1930, p.157, fig. 108 c, e, f; Llanos 1936, lámina IV, 5/336; Valcárcel 1935, lámina V, 1/271; Rivera 1976, p.53, fig. 87 (top figure). Lattice A handles are also associated with Huatanay Polychrome and other designs.

vi/vii) Not yet noted from elsewhere.

C. Dating

LH.

The Cuzco style - the plate¹

Sample - 190 sherds Figures LXXV-LXXVII
(145 rims and 45 body sherds)

A. Description

1. This is a common form taking into consideration the total sample, but it must be remembered that 83% of the sherds are from Pachacamac.
2. In the study area it is found only in the Sisicaya sector with a very small quantity of sherds from the Panquilma excavation. Although its dearth in the study area reflects sampling methods to a certain extent, my examination of surface sherds gives me the impression that it has never been common there. This is strange when contrasted with its relative abundance at Pachacamac in the Temple of the Sun excavations.
3. There are fifteen sherds from surface collections and 175 from excavations. Of the latter 159 come from Strong and Corbett's excavation at Pachacamac and three from Patterson's

excavation there. There are three from the Panquilma excavations and ten from Avillay.

4. The general shape of the plate is as well known as other Cuzco shapes. There are however slight variations in contour in the valley, as there are in the Imperial Cuzco style. The first is illustrated in fig. LXXV a, e, and g. They show a very open, shallow bowl shape with a gently curved interior and a convex exterior down to the corner point of the flat base. This is the shape that usually has the animal handles or a curved loop handle (fig. LXXVII a, c, f). The second shape has a convex interior profile and concave exterior profile, the reverse of the previous shape. It is best seen in figs. LXXV m and LXXVI a. Menzel (1976, plate 21, fig. 250) gives a perfect illustration of this shape, which, she states, is Imperial Inca. It has a pair of small lugs on opposite sides of the plate (fig. LXXVI f). It seems less common in the Lurín study area, but is found in fair amounts at Pachacamac.
5. Not applicable here.
6. The lip is rarely rounded (fig. LXXV c), being generally tapered and slightly flattened on the exterior (figs. LXXV a, b; LXXVI c, g). Sometimes this results in a small interior overhang (figs. LXXV d, i, j; LXXVI b). Sometimes the lip is merely flattened, which is common with the second type of plate (figs. LXXV k, m; LXXVI a, f).
- 7a. The rim diameters in the valley fall between 10 and 26 cms, the upper and lower measurements being unique. The majority of rims fall between 12 and 18 cms. At Pachacamac the upper end of the range is 34 cms and the lower is as in the study area. The upper measurement seems extreme and beyond

anything given for Imperial Cuzco in Table 38. At present it cannot be explained and certainly the majority of plates studied from Pachacamac fall between 14 and 20 cms, with a couple at 28 and 30 cms. The large size may simply be a provincial characteristic. The heights of measurable plates in the valley range from 1.30 to 4 cms.

- 7b. Not applicable here.
8. The handle shapes are varied, particularly at Pachacamac. They range from animal and bird heads (fig. LXXVII a - d), to small vertically placed loops (fig. LXXVII f), as well as horizontally placed ones at Pachacamac (not illustrated here). Animal or loop handles are usually combined with a small pair of lugs on the opposite side of the plate (figs. LXXV a; LXXVI e). The second type of plate has two opposing pairs of these (fig. LXXVI f). All handles and appendages are set at the vessel lip.
9. The base is always flat and roughly about half the diameter of the rim. The one illustrated in fig. LXXV a is 7.50 cms in diameter.
10. The colours used for the pigments are usually red, white and black. This is true of the study area, but at Pachacamac, where there are plates in Qoripata Polychrome with its maroon/purple ground, this latter colour is sometimes contrasted with a vermilion red. There is also a very light orange pigment on one plate from that site. Some plates in the study area are unslipped. Others have an overall red slip with decoration and others a base white slip. The design area varies. There is usually a circumferential rim band around the interior. Between the handle and the two lugs opposite there is a central panel, which may be further divided into a

series of bands. The remaining semi-circles may be completely or partially covered with a design, or left bare. On rare occasions, the plate is quartered by two panels that intersect at right angles. Sometimes the circumferential bands continue inwards leaving a small, bare, centre circle. Finally, there may be an overall naturalistic design. For examples of these different design areas see Pardo 1957, p.587, láminas 9 and 10. In the Lurín study area a single centre panel or circumferential bands are the common ways of using the design area.

11. The decorative possibilities for plates are as follows:-

a) for the exterior:-

- i) Unslipped - this can be found with unslipped interiors (fig. LXXV a, b), or with slipped and/or decorated interiors (fig. LXXV d, g), in which case there is always a black stripe around the flattened part of the lip.
- ii) White slipped with a black stripe around the lip (fig. LXXV c, i).

b) for the interior:-

Monochrome

- i) Unslipped (fig. LXXV a, b, e).
- ii) White slipped with no decoration (fig. LXXV c, d).
- iii) Red slipped with no decoration (fig. LXXV f, g, h).

Lattice design

In this case the background of the centre panel is white.

- iv) A lattice A in red and black combined with lateral red bands (figs. LXXVI h; LXXVII c).

11. b) v) A variation of lattice A with triangles painted in solid colours, alternate red and black (fig. LXXV m).
- vi) Bands of solid triangles within small rectangles alternately red and horizontal, then black and vertical (fig. LXXVI i).

The combination of the lattice central panel with a common rim decoration should be noted (fig. LXXV m).

This rim is a white circumferential band extending less than one centimetre from the lip and bordered by a double black stripe. Around the band is painted a row of solid black triangles, their apex pointing towards the centre of the plate. Fig. LXXVI a, b, c, show this rim design without the centre panel.

Qoripata Polychrome

- vii) A red-slipped interior with decreasing circumferential bands outlined in black stripes. Groups of black vertical stripes are placed at intervals around each band, the intervening rectangles being filled with white dots (fig. LXXV i, j, k).
- viii) A red-slipped interior containing large concentric white rectangles outlined by black stripes (fig. LXXVI f).
- ix) A red-slipped interior with a circumferential rim band outlined in black stripes. Inside is a row of hollow black diamonds with white dots in the intervening triangles (fig. LXXVI d).

11. b) cont.

Miscellaneous

- x) The fern design with red end blobs on the unslipped orange interior of the plate. The circumferential rim band has red triangles instead of the usual black. This is an unusual design from Pachacamac and has not been found in the study area (fig. LXXVII e).
 - xi) A partially white-slipped plate with white-outlined black triangles on a red ground in the rim band. Beneath this is another circumferential band of red crosshatched diamonds outlined in black with red dots in the intervening triangles (fig. LXXVI g).
 - xii) Miscellaneous red and black or black lines on a white-slipped interior. The sherds are too tiny to be certain of the design (fig. LXXV 1, n).
- c) for the handles and lugs:-
- i) A bird or reptile head that can be either unslipped (fig. LXXVII d), or painted in red and white (fig. LXXVII c). Bingham (1930, p.141, figs. 98 f and g) considered such handles as stylised bird heads. Strong and Corbett (1943, p.54) considered them as alligator heads. Some of the Pachacamac specimens (fig. LXXVII a) do seem to me to be closer to a stylised representation of a reptile, rather than a bird, although Rowe thought differently for, in a personal communication to Corbett before the publication, he stated that their alligator heads were bird heads. In view of the finding of the reptile effigy vessel at Avillay (fig. ^xLXXVI a), the

11. c) i) cont.

inhabitants of the valley were obviously well aware of reptiles and are likely to have represented them on plate handles, or to have confused their representation with that of stylised birds.

- ii) An animal head painted white and black (fig. LXXVII b).
- iii) A vertical loop painted white with black horizontal bands (fig. LXXVII f). This is only one of its kind at Pachacamac.

The small lugs opposite the effigy handles, or in pairs on opposite sides of the plate, were plain on an unslipped plate (fig. LXXV a), or slipped black or white with black grooves on a decorated plate (fig. LXXVI f).

12. Bingham (op. cit., p.132) calls these plates "drinking ladles" and assumes that they were used for the consumption of food. They were found at Machu Picchu in both the graves and the city ruins (ibidem, p.135). On the central and south coast they are associated with graves and refuse from looted graves, as they are in the study area. Pardo gives three ways in which they were used:- for the consumption of food; as votive offerings in graves or temples; and as lamps with a lighted wick in the centre of the plate (op. cit., pp.587-588). At Huánuco plain plates are associated with residential structures and decorated ones with a small ceremonial structure (Morris 1967, pp.220-222). Given the fact that in the Lurín they are found unslipped, monochrome and polychrome, unlike the other Cuzco-style vessels previously discussed, it is possible that they had more than one function. In this respect I have noticed that on certain Pachacamac sherds there is a blackened patch in the centre of the plate, as if something had been burned there.

B. Relationships

a) for the exterior:-

There is little information on this. Bingham describes an undecorated plate (op. cit., p.134, fig. 89 d), yet gives no information on white-slipped exteriors. An examination of the large sample from Pachacamac shows that very few plates had a white exterior.

b) for the interior:-

i/iii) Valcárcel (1935, p.7, lámina I and p.8, lámina II)

illustrates a selection of plates:- plain - 1/561;
red-slipped - 1/262; and white-slipped - 1/550.

iv/vi) Bingham illustrates the filled in lattice (1930, p.145, fig. 100 a) and the open lattice A in a centre band (op. cit., p.172, fig. 123 d). Both are also illustrated by Pardo (1957, p.587, lamina 9 n, p).

No.vi) is unknown from elsewhere.

vii/ix) Qoripata Polychrome with the black stripes and white dots is illustrated in Bingham 1930, p.141, fig. 98 h; p.136, fig. 92; in Rowe 1944, fig. 19-4; and in Llanos 1936, lámina II, 5/93. No.ix) has not been noted elsewhere.

x) The fern design on a plate is highly unusual. The only other example, to my knowledge, is from Strong and Corbett's excavations at Pachacamac, where the plate has the fern design running down the centre band.

xi) Pardo (op. cit., p.587, lámina 9 q) illustrates a circumferential band of diamonds beneath one of triangles, but the remainder of the plate is covered with decoration, unlike the specimen here.

- B. xii) Not applicable because the design is not certain.

It should be noted that the interior rim decoration of black triangles can be seen on plates from the Cuzco region in Pardo, 1957, p.587, lámina 9 n, ñ, p.

- c) for the handles:-

- i) Examples from the Cuzco region have a more abrupt slope from the neck to the top of the head than do the valley examples. See Bingham 1930, p.143, fig. 99f and Varcárcel 1935, lámina II, 1/259.

Closer to the Lurín shape is one illustrated from Chíncha in Menzel 1966, plate XII, fig. 36.

- ii) This is generally similar to some illustrated by Bingham 1930, p.147, fig. 101 g, h; also Rivera 1976, p.90, fig. 121.

- iii) Bingham 1930, p.134, fig. 89 e; Pardo 1957, p.582 lámina 8 d; Valcárcel 1935, lámina II 1/345.

C. Dating

LH.

NOTES

1. The present analysis does not include the complete range of plate decoration for Pachacamac, which will be the subject of a future study.

The Cuzco style - The pedestal base and
tripod olla with a lid

Sample - 170
(80 rims, 90 body
sherds including
the lid)

Figures LXXVIII-
LXXXI

A. Description

1. This is a common form, as frequent as plates and two-handled dishes.
2. It is more evenly distributed than plates, that is, although there are large numbers from Strong and Corbett's excavation, it occurs in the study area in reasonable quantities, similar to those of two-handled dishes. It is found in all sectors and is predictably more frequent in Sisicaya. There are few specimens from surface collections in the Huaycán sector, but a fair amount from the Panquilma excavation belies the surface impression.
3. There are 51 sherds from surface collections and 119 from excavations. Of these two come from Patterson's excavation, 78 from Strong and Corbett's, sixteen from Panquilma and 23 from excavations at Avillay.
4. There is no whole vessel from the valley study area, although there are at least two from Pachacamac (Uhle 1903, plate 18, figs. 4 and 5). Fig. LXXVIII a shows a similar olla from the Cuzco region. This has a height of 20 cms and a rim diameter of 14 cms. The base of the pedestal is 8 cms and the diameter of the lid is 12.50 cms. These proportions, the shape and set of the handle, as well as the lid shape, are different from those illustrated by Uhle, and Menzel (1976, figs. 145, 147, 203, 219, 254). Bingham's diagrams support

differences of shape between coast and highlands, particularly in the height of the pedestal base and in the curve versus corner point at the base of the olla (1930, p.118, fig. 2 a - c).

(Some specimens from the study area have a sharp corner point before the wall curves into the base (fig. LXXVIII l, p)).

A further difference between the Pachacamac ollas and those illustrated by Bingham is that the former have no modelled decoration in the form of nubbins or snakes on the face opposite the handle (cf. Bingham 1930, figs. 103 - 107).

However, some from the study area do have this decoration (fig. LXXIX a, c, d). The height of the Pachacamac vessels falls within the range given for Imperial vessels in Table 38.

5. The rim is very short and flares outwards, being similar in length to rims of two-handled dishes. The angle at the neck interior is usually acute (fig. LXXVIII c - f), occasionally a right angle (fig. LXXVIII g, n) and rarely obtuse (fig. LXXVIII b, m). The wall of the vessel always flares outwards more than those of the dishes.
6. The lip is usually rounded and slightly tapered (figs. LXXVIII b - d; LXXIX c). On rare occasions it is slightly flattened (figs. LXXVIII h; LXXIX b).
- 7a. Rim diameters in the study area vary between 8 and 18 cms, the majority being between 12 and 16 cms. There is no size difference between Pachacamac and the study area.
Lid diameters range from 5 to 17 cms in the valley and are, as they should be, smaller than the vessel rim. At Pachacamac they range from 12 to 26 cms. The latter figure seems too large, but it is possible that some of the larger lids were in fact crude, unslipped plates, or that larger vessel rims remain to be found there.

- 7b. The rim height ranges from 0.30 to 1.10 cms.
8. The only handle associated with a rim in the Lurín is horizontal and 2.50 cms wide. It extends upwards to a point higher than the rim (fig. LXXVIII p). The lid handles in the study area are all tubular in our sample (fig. LXXXI a, f, h, i). At Pachacamac strap ones are also found (fig. LXXXI d, g).
9. In the study area there are variations in the length of the pedestal base (fig. LXXX). Its diameter varies from 3 to 10 cms in the Lurín and from 8 to 20 cms at Pachacamac. This last figure is not unlikely, given the wide size range at Machu Picchu, but the widest rim diameter is only 18 cms there and bases are always smaller in diameter than the rims. Some of the vessels had a tripod base as illustrated by Pardo (1957, p.575, lámina 6 a). There are a few legs from Pachacamac and the study area (fig. LXXX i - k). They are about 2 cms in diameter.
10. There is no overall slip for any vessel in the study area, although there is one red base (fig. LXXXI c). All rim interiors are painted red and some vessels have red paint over the modelled decoration or use it for decorative purposes (fig. LXXIX a, b) on an unslipped background. However, at Pachacamac Strong and Corbett (1943, p.61, fig. 12 a, b) illustrate two rims in this vessel category that have a white slip and are burnished. The study area specimens are lightly burnished.
11. The only decorative possibilities are for the upper shoulder of the vessel on the side opposite the handles. This decoration usually takes the form of a modelled or stamped design. These designs are as follows:-

11. cont. i) A modelled snake similar to those found on Orange Ware forms (figs. LXXVIII 1; LXXIX d).
- ii) A projecting semi-circle that resembles an ear (fig. LXXIX c).
- iii) A curvilinear motif with "fingers" incised at each end and painted red (fig. LXXIX a).
- iv) A zigzag red band running horizontally around the vessel (fig. LXXIX b).
12. Their function is not easy to ascertain. Examples found at Pachacamac and at Ica were purely grave vessels and show no signs of charring. The same appears to be true of specimens from Ollantaytambo and Sacsahuaman (Valcárcel 1935, lámina IV 1/405. Llanos 1936, lámina V 5/310). On the other hand at Machu Picchu Bingham found that all showed signs of charring at the base and particularly on the side opposite the handle (1930, p.150, 152). Pardo follows Bingham in assuming that they were used for heating food, although the pedestal base would have prevented a rapid heating (1957, p.579). He also suggests a liturgical use for them, maybe for heating incense in ceremonies. My own view is that the latter is closer to the truth. Most are too small to be used for effective cooking and the name cooking pot is a misnomer.

B. Relationships

Some comparisons between Imperial and Provincial vessels have already been made in sections A4 and 12. With regard to decoration, the following similarities can be noted:-

- i) A snake of similar proportions can be seen in Bingham 1930, p.151, figs. 104 and 105 a. The difference lies

in that the Cuzco examples have incised grooves to indicate facial features and incised dots on the body.

- ii) The "ear" can be seen in Bingham 1930, p.149, fig. 103 c.
- iii) The shorter curvilinear design, which is probably a variant of the snake, can be seen in Bingham 1930, p.151, fig. 105 b, and p.153, fig. 106 a, both with incised dots; and 106 c with an incised groove. Pardo 1957, p.575, lámina 5 d, illustrates a similar design which he considers a snake.
- iv) This has not been noted elsewhere.

It is interesting that the commonest Imperial appliqué decoration, two small nubbins (Bingham 1930, p.150, p.153, fig. 106 g - i), has not yet been found in the study area.

C. Dating

LH.

The Cuzco style - other jars

Sample - 91
(46 rims and 45
body sherds)

Figures LXXXII-
LXXXIII

This is a very mixed group that includes at least two shapes, A and B, as defined in Table 38, plus some body sherds that are from jars, but definitely not from aryballi. In this category there are two fragments (fig. LXXXIII b, c) that in shape resemble small Cuzco bottles, but whose decoration is closer to Black Ware. They have been included here as a matter of convenience. It is

possible that they were intended as Black Ware but that they were improperly fired.

A. Description

1. Other jars are less common both in the Lurín and at Pachacamac.
2. Most of these jars are found in the Chontay and Sisicaya sectors. There are only two from Huaycán, both of which come from Panquilma. Group A is found at Pachacamac, but has not yet been noted in the study area. Group B is found at both locations.
3. There are 29 sherds from surface collections and 62 from excavations. Of these, 46 sherds come from Strong and Corbett's excavation at Pachacamac. There are none from Patterson's excavation, only one from the Panquilma excavation and fifteen from Avillay.
4. There are at least two shapes represented here.
Group A vessels (fig. LXXXII a) have a considerable size range, since they may be from 8 to 55 cms high. They consist of a flat-based jar with a body similar in shape to an aryballus but narrower. The rim flares outwards with no corner point at the neck and two strap handles extend from the lip, or just below it, onto the upper shoulder. Some Imperial examples (Pardo 1957, p.589, lamina 12 g) have a single handle in the same position but this has not been seen in the study area. Decoration may consist of solid red and white panels (Bingham 1930, p.169, fig. 120 d); an overall pattern (Pardo op. cit., p.589, lámina 12 f); or a band around the middle (Bingham op. cit., p.168, fig. 119 a).
Group B vessels (fig. LXXXII g and h) consist of a small

jug with a similar body profile to the first and a flat base. The rim is either a short outward-curving flare (fig. LXXXIII g; Uhle 1903, plate 18, fig. 7), or a bottle neck (fig. LXXXIII h). The size range of this group is smaller than that of the previous group, being from 7 to 13 cms¹. The decoration is either one of vertical panels of diamonds or the fern design (Pardo, op. cit., p.567, lámina 2 a, e), or else in the form of a horizontally-placed panel with diamonds or zigzags (Pardo, ibidem, b, c, d). Handles are found on the upper shoulder (on rare occasions from rim to shoulder) and take the form of large loops that can be placed either vertically or horizontally (Pardo, ibidem; Bingham 1915, p.268, fig. 51).

5. In the Lurín the rim of group A vessels flares outwards from the vertical for about 3 cms. There is no sharply defined junction between rim and body on either the interior or the exterior (fig. LXXXIII b, c, d, f)². With regard to the group B vessels, those with flaring rims have profiles similar to those discussed above, but on a smaller scale (fig. LXXXIII i - l). The bottle necks have either a straight tube-like rim with the slightest of flares at the lip (fig. LXXXIII a), or a gently flaring bottle rim with the flare starting one third of the way up (fig. LXXXIII m, n).
6. The majority of lips for both groups of vessels are flat or flattened (fig. LXXXIII d, f, j, k, l).
- 7a. Rim diameters for group A vary between 16 and 30 cms, which puts them in the range for the Imperial Cuzco vessels. It is impossible to calculate heights from the available sherds, but both Bingham and Pardo give an upper limit of around one half metre for vessel height, which would fit the larger

- rims from Pachacamac. The small group B jugs range in rim diameter from 4.20 to 8 cms and those with bottle necks from 3 to 4 cms. They were probably no more than 15 cms high.
- 7b. Rim heights for group B bottle necks were around 5.50 cms and for small jugs from 0.50 to 1 cm. For the larger group A vessels they range from 1 to 3 cms.
 8. The only handle from a small group B jug is 1.95 cms wide (fig. LXXXIII d) and painted half black. Handles on the larger group A vessels from Pachacamac are over 3 cms wide and the one in fig. LXXXII b was slipped white and burnished.
 9. Flat jar bases are illustrated in fig. LXXXIII e, h, i. Only one is unslipped (fig. h), and this is from a small group B jar. The other two have an unslipped base and an overall red slip or red decoration on the vessel wall. Both these are from larger group A jars, since fig. i measures 21 cms in diameter.
 10. The decoration of the small group B jugs is either red and black on buff, or else red and black on white. Most of the small jugs with flaring rims also have a red interior rim band (fig. LXXXII j - l). The large group A jars all have the red interior rim band. The exterior of these latter jars is either plain or white slipped (fig. LXXXII b, e). In one case there is a red band around the neck exterior (fig. LXXXII f). There is no further information on decoration for this group. The bottle rims were either plain (fig. LXXXII m) or red-slipped (figs. LXXXII n; LXXXIII a). The latter rim has a black band around the lip.

11. Decoration for the body of group B jars is as follows:-

- i) Black frets? on an unslipped buff surface (fig. LXXXII i).
- ii) A red-slipped exterior (fig. LXXXII k), with or without a white band around the neck (fig. LXXXII l).
- iii) An unslipped jar modelled with vertical grooves to give the impression of a fruit. There is a small raised collar filled with incisions. These may be vertical and horizontal slashes (fig. LXXXIII c), or a broken zigzag line interspersed with small slashes (fig. LXXXIII b). These jars are half way between the Cuzco style and Pachacamac-Inca Black Ware.
- iv) A red-slipped jar with a white horizontal panel filled with black solid diamonds (fig. LXXXIII d).
- v) A raised vertical panel with a black zigzag vertical line interspersed with small black open squares. On one side is a column of small black v's, on the other a red lattice B (fig. LXXXIII f).
- vi) White horizontal panels on a jar neck. They are outlined by a double black stripe and contain a row of solid black diamonds. In the intervening triangles are small red teeth-like rectangles (fig. LXXXIII g).

B. Relationships

- i) This design has not been noted from elsewhere. It is, in any case, very crudely executed.
- ii) Such vessels may have possessed horizontal panels with a diamond design lower down on the body (fig. LXXXII h).
- iii) Compare these with the Black Ware examples shown in Uhle 1903, p.63, figs. 69 and 70, and p.64, fig. 71. The Pachacamac vessels have the grooved body and

B. iii) cont.

the incised collar.

- iv) See Pardo 1957, p.567, lamina 2 f. Also Valcárcel 1935, lámina VIII, fig. 3/338, for another solid diamond panel on a small jar.

- v/vi) Not noted from elsewhere.

C. Dating

LH.

NOTES

1. In Table 38 Bingham gives 23 cms as the upper height for these jars, but this is for a face-neck jar, which although found at Pachacamac (Uhle 1903, plate 18, fig. 2), is not yet noted in any of the valley collections.
2. Fig. LXXXII e, is slightly different because of its interior rim corner point. It may be closer to what Pardo calls an urpu (Pardo 1957, p.593, lámina 13, fig. b. See also Rowe 1944, p.48, fig. 8, shape e), but I have never seen a complete vessel of such a shape from Pachacamac. It is classified in this group as a matter of convenience.

The Cuzco style - bowls

Sample - 17
(13 rims and 4
body sherds)

Figures LXXXIV-
LXXV a - c

A. Description

1. Bowls painted in the Cuzco Polychrome style, or a derivation of this, are very rare in the valley, yet distinctive enough to warrant special comment because they have no counterpart elsewhere.
2. With the exception of the square bowl (fig. LXXXIV c) from Panquilma in the Huaycán sector, they are found only at Sisicaya and there are none from Pachacamac.
3. There are eleven sherds from surface collections, mostly from Avillay in 1968, and six from excavations, again all from Avillay. In fact this site and 164 are the only ones where the small open bowl is found. One of the enclosed bowls is from Avillay and the other from site 104.
4. There is no complete example of an open bowl, but a large sherd from Avillay (fig. LXXXIV c) gives a reasonable idea of what these bowls were like. The base was flat with a slightly outcurving wall that rose only a couple of centimetres to the lip. The interior has a concave profile and the exterior a convex one. The juncture between the base and the vessel wall is well defined. The two enclosed bowls are represented by two small sherds and have a wall that curves inwards towards the lip, giving the impression that they were spherical. In view of the small size of the sherds and what appears to be an unusual form either for the valley or for Cuzco Polychrome, it is possible that these are not bowl fragments at all, but from jars like the form illustrated in fig. XLIX g, that is, a kind of flask with a circular hole

in one side. The decoration might make more sense if the sherds were to be re-orientated, as if their rim was, in fact, the edge of the hole in such a flask. Finally there are three rectangular bowls (fig. LXXXV a - c) with straight sides and a flat rectangular base. Two are similar in height to the small open bowls of fig. LXXXIV, but the third (fig. LXXXV c) is over twice as high. It is of interest that this specimen comes from Panquilma and has unusual pigments in its decoration.

5. This is not applicable.
6. The lip of all open bowls is flat, as is that of the rectangular ones. The lip of the enclosed bowls is either thinned on the inside and rounded (fig. LXXXIV a), or thickened and rounded (fig. LXXXIV b).
- 7a. The rim diameter of the small open bowls varies between 7 and 10 cms, although that of the bowl in fig. LXXXIV j may have been larger. Their height varies from 2.20 to 4.50 cms. The diameter of the enclosed bowls is from 6 to 8 cms. That of the rectangular bowls is unmeasurable, but one side of the rectangle of the bowl in fig. LXXXV c was 6 cms long.
- 7b. This is not applicable.
8. None of the bowls appears to have had handles.
9. The bases were always flat and about 2 cms less in diameter than the rims.
10. All bowls are decorated on the exterior, leaving the interior unslipped and burnished, with the exception of three that have decoration in black on a red-slipped or unslipped interior (fig. LXXXIV f, h, j). The exterior decoration is in red and black on a white ground.

11. Most bowls have a black or red stripe on the flat lip.

The decorative possibilities are as follows:-

a) for the interior:-

- i) Unslipped but lightly burnished (fig. LXXXIV c - e, g, i, k, and fig. LXXXIV a - c).
- ii) Red slipped with or without a black design on the base (fig. LXXXIV f, h).
- iii) Unslipped with black design of fishes on the base.
One of the fishes is the suche or catfish. The other is uncertain (fig. LXXXIV j).

b) for the exterior - open bowls:-

- i) Unslipped but lightly burnished (fig. LXXXIV a, b).
- ii) White-slipped and covered with solid circles in red (fig. LXXIV c), or red and black (fig. LXXIV d, e, f).
- iii) White slipped with an overall design of thick black v's on their sides (fig. LXXXIV g).
- iv) White slipped on the upper half and red on the lower half, with a design of orange hollow circles on a black band just below the rim, and a combination of vertical red wavy lines and vertical black straight lines on a white ground (fig. LXXXIV i).
- v) Rows of black solid diamonds on alternate horizontal bands of orange and red (fig. LXXXIV k).
- vi) An orange and white ground with a design of diagonally-quartered rectangles with small concentric squares inside the resultant triangles. This design is in a brown/black colour (fig. LXXXIV c).

b) for the exterior - closed bowls:-

- vii) A white slip with an insect? design in black (fig. LXXXIV a and b).

B. Relationships

The bowl form described here is unusual and not listed as a standard Cuzco Polychrome shape (see for example, the list of shapes in Bingham 1915; Rowe 1944, p.48, fig. 8; and Rivera 1976, p.29, fig. 43). On the other hand, Bingham does illustrate two saucers that look similar (1930, p.172, fig. 124 a, b). However, they seem to be decorated on the interior rather than the exterior, and he gives no indication as to whether more were found in Machu Picchu. They do not appear to derive from the plates.

With regard to exterior decoration, the relationships are as follows:-

- i) These are not considered further.
- ii) To my knowledge there are no white surfaces covered with solid circles in Imperial Cuzco Polychrome. The nearest design is what Menzel has termed the "tadpole" design (1976, p.154; plate 51, fig. 40; plate 55, fig. 60), where solid circles on a plate have small tails. This design is also found at Pachacamac (Strong and Corbett 1943, fig. 8 b).
- iii) To the best of my knowledge, this design is not found on Imperial Polychrome. The closest design is a thick zigzag on the interior of one of Bingham's saucers (op.cit., p.172, fig. 124 b).
- iv) The black band with circles is a feature of Imperial Cuzco design (Menzel op. cit., p.163) but the orange paint is unusual for the valley where the circles are usually executed in white on a black band. The wavy and straight lines have already been noted on aryballi.
- v) The solid diamond design is well known from other contexts discussed here. It is found on aryballi,

two-handled dishes and plates.

- vi) The design on the square bowl is not unusual, being similar to those found on aryballi (fig. LXVI), but the combination of the orange and black slips (the latter verging on brown) is unusual for the Lurín. The border of triangles filled with dots is reminiscent of the incised designs on Black Ware (fig. XC 1).
- vii) Insect designs are found both in Imperial and Provincial Cuzco styles (Rivera 1976, pp.72-73, figs. 109 - 110; Menzel 1976, plate 36, fig. 491).

Finally the fish design on the bowl interior is also known from Imperial Cuzco sherds. Rivera 1976, p.74, fig. 111 and p.76, fig. 112, illustrates several examples, as does Pardo 1957, p.587, lámina 10, figs. v and x.

C. Dating

LH.

Miscellaneous modelled and painted sherds related to the Cuzco Polychrome style

Sample - 125
(23 rims and 102
body sherds)

Figures LXXXV d - h
LXXXVI

The discussion proceeds item by item, since most pieces are unique.

A. Description

- i) Fig. LXXXV d and e shows small jars with a lattice/diamond design on the upper shoulder. There are two examples from Sisicaya, both made on the Orange Ware paste and crudely burnished. Fig. ^xLXXXV d has lost its

rim, but fig. LXXXV e, shows a small flare with a rounded lip. Only one has an overall red slip. Both have a horizontal panel bordered by black stripes on their upper shoulder. One has crudely-executed hollow diamonds in black on the natural buff/brown surface. They are formed by double black lines. The other has similar diamonds on a red ground. The smallest diamond in the series is cross-hatched and intervening triangles are filled with white dots. There is a red rim band around the rim interior.

- ii) Fig. LXXXV g shows a variant of the two-handled dish. The walls are too outflaring for a normal dish and the rim is too small. It is poorly burnished. The handle and panel are white with diagonally-hatched red diamonds on both. The rim interior is red.
- iii) Fig. LXXXV f shows a jar body sherd, which is unusual because of its matte surface and its modelled ridge, neither of which are features of Provincial Cuzco Polychrome. The decoration of black and white vertical bands and thick black blobs on the white ridge is unique in the valley.
- iv) Fig. LXXXV g shows a small lug or handle from an unknown jar. It is similar in shape to the lugs on Black Ware bowls (cf. fig. XCII h) and is slipped red with black lines for the usual incised grooves.
- v) Fig. LXXXVI a shows a vessel modelled in the shape of a reptile. The surface was slipped white, but this has worn off in many places. The head is red with the eyes and mouth modelled and painted in black and white. The body decoration is derived from Cuzco Polychrome with

its vertical red bands outlined in black, that are bordered with red wavy lines on white.

- vi) Fig. LXXXVI b illustrates a small globular jar with a bird face crowned by a tallish flaring rim. Wings? are indicated by two protuberances on the upper shoulder. It is a well-burnished vessel made from a light brown paste.
- vii) Fig. LXXXVI d illustrates a sherd that may be part of a bird head. The colouring is similar to that of fig. a, that is, an overall red slip with the circular eye modelled and painted in black and white.
- viii) Fig. LXXXVI c, e, f and g show sherds from anthropomorphic vessels, one of which (fig. g) is a face-neck jar. This latter is very charred but appears to have had an overall red slip, with features modelled and painted in black and white. Fig. e. shows the body of a face-neck jar, where the person depicted is wearing a striped shirt of red and black on white and carrying a burden. In fig. f, the face itself probably constituted the jar. As with so many LH fancy jars, the face is red-slipped with the features emphasised in black and white. The modelled eye in fig. c is also painted in black and white. This sherd is slipped white with a design of red and black lines and black dots.

B. Relationships

- i/ii) The small two-handled dish is close to the Cuzco Polychrome ones discussed previously in its general shape and decoration. Its profile is just outside the norm for Imperial dishes and its decoration is crudely executed.

The jars are not standard Cuzco shapes. Only the general similarities of decoration, that is, the horizontal panel with a diamond design, relate them to the style. In all three examples there is less burnish and a coarser paste is used than is normal for Provincial Cuzco Polychrome in the study area.

- iii) I can find no whole vessel with a decoration resembling this one.
- iv) No painted lug has yet been noted elsewhere.
- v) The reptile effigy vessel is unique, although snake vessels have been discussed under Orange Ware (fig. LV c). Its decoration relates it to Cuzco Polychrome.
- vi) The bird jar is, in a general way, related to certain face-neck jars from Pachacamac, which are usually Black Ware (Uhle 1903, plate 13, figs. 3, 4). One of those illustrated by Uhle has two small protuberances on the upper shoulder for hands. These jars both have a flaring rim above the face. It is possible that the jar was intended as a Black Ware jar, but that it was improperly fired.
- vii) The form has not been noted elsewhere, but it is related by its pigments to Cuzco polychrome.
- viii) Among the anthropomorphic jar sherds, c and f are related by pigments and surface treatment to Cuzco Polychrome. (It must be remembered that the decorated pottery of the LIP has a dull matte surface (Uhle 1903, p.41)). The striped shirt of fig. e, is reminiscent of a figure illustrated by Means (1931, fig. 131), which he calls a Late Chimú portrait vase, said to be found near Lima.

It shows a man dressed in a striped shirt and carrying a carcass on his back. The shirt and the position of the arms are very similar to those on the sherd illustrated here. The face on fig. g is similar to those of face-neck jars in Black Ware from Pachacamac (Uhle op. cit., plate 13, figs. 2 - 4).

C. Dating

All these vessels are LH because of resemblances to Cuzco Polychrome or to vessels associated with it. Vessels such as the reptile, the jars and dish, are clearly related by their designs to Cuzco Polychrome. The rest are less obviously so, but the pigments and burnish are revealing. The fact that the eyes are coloured in alternate black and white, the round eye for birds and the elliptical one for humans, are features of Inca-associated pottery at Pachacamac. What is of interest is that the combination of local, Chimú and Inca styles was giving birth to a new coastal polychrome.

BLACK WARE

This ware is less uniform than it appears, for it encompasses two pastes and various techniques for obtaining the black surface. It has also the greatest variety of shape and decoration seen in a late central coast style. Menzel has implied that LH Black Ware from Pachacamac is not mould-made, but coiled in common with most Inca pottery (1977, pp.27-28). This may be true with regard to one-handled jugs, such as shown in fig. LXXXVII a and b, but the presence of a sherd from a mould in the Panquilma excavation (fig. LXXXVII j) makes it likely that certain spouted and zoomorphic forms were, in fact, mould-made. (For example, the fish fins in fig. LXXXVII k and the Chimú type vessel in fig. ^XLXXXVII g). Those vessels made in imitation Inca shapes, such as aryballi, were coiled, but bowls and plates were probably formed from a single lump of clay. Handles, spouts, lugs, bridges and other appendages were modelled separately and then attached to the vessel (cf. Menzel 1977, fig. 40, where the separateness of each vessel part is clear. See also fig. LXXXIX k).

Shapes copy all the standard Cuzco-style ones discussed previously, except for the pedestal base olla and lid. Of particular interest is the relative abundance in the study area of the two-handled dish (figs. XC; XCI). Other forms include an imitation of Orange Ware form I (figs. XCIII e; XCIV a - e), and a small bowl with a slight shoulder carination, a form unique to the central coast (figs. XCII; XCIII a - d). Finally, there is a variety of modelled jars with a spout or a face-neck. Some of

these imitate the Chimú style (Uhle 1903, p.65, fig. 78), but others are unique combinations of Cuzco, Chimú and coastal features, (Uhle, op. cit., pp.63-65, figs. 67-77).

Decorative techniques consist of incision on the collars of small jugs and on bowl and dish exteriors. On jars, ollas and two-handled dishes there is also stamping by means of a pottery stamp (fig. XCI h, m), or press-moulded stippling (fig. LXXXIX k). Vessel bodies can be modelled in the form of an animal or fruit (fig. LXXXVII a, b, k), and modelled animals, birds and reptiles may be used as adornment (figs. LXXXVIII c; XCII e - g). There is also post-fired resin painting of incisions on bowls and dishes in red, white and yellow. This last is also a feature of the ceramic spindle whorls (fig. C a - h).

The paste can be divided into two kinds: a very fine and a medium fine. Surface treatment is slightly different for each one. The former averages from 0.20 to 0.40 cms in thickness for vessel walls and spouts, but is thicker at corner points, such as the neck. Most of the small fancy jars are of this paste. The core has a light grey, uniform colour (Munsell 2.5YR N.6). A few specimens from upvalley are unevenly fired so that the core is a grey/beige colour (Munsell 5YR 5/1 to 4/1). This paste is very compact with no visible inclusions. The other paste is grainier, less compact and shows a few inclusions ranging from 0.20 to 0.50 mm in diameter. The vessel walls average from 0.45 to 0.60 cms and the paste is used for the bowls, dishes, plates and some larger jars. Its core colour is the same as that of the finer paste.

Vessel exteriors for both pastes are well burnished to give a rich gloss. However, the burnish is better executed on the small jars made of the finer paste, such as in fig. LXXXVII h - m. Polishing tracks are visible on most pieces and show vertical lines for bottle necks and spouts and horizontal or diagonal ones for jar bodies. They can be appreciated quite easily on the photograph previously cited in Menzel 1977, fig. 40. Bowl, dish and plate interiors are finished in the same way as the exterior. Jar interiors of the fine paste are smooth to the touch, but those of the medium paste have scraped interiors.

The black colour of this ware comes from firing in a reducing atmosphere. My impression of the sample of Black Ware available to me from Strong and Corbett's excavation is that there was better atmospheric control at Pachacamac than in the study area. All the various shapes from Pachacamac are a deep black and glossy, the only exception being a couple of bowls with a snake design (fig. XCII a), which have uneven beige streaks across them. Upvalley some vessels in both pastes were patchily fired to give a greyish-brown surface of Munsell 10YR 2/1 to 3/1, 4/1, 5/1 and 5/2. This contrasts with the deep black surface referred to previously, which has a Munsell colour of 7.5YR N.2. In this connection it is interesting that, according to Menzel (1976, p.122), what distinguishes Pachacamac Inca Black Ware from genuine Chimú Black Ware is its "smooth glossy finish and even, deep charcoal blackening, whereas Chimú ware has a more uneven blackening, much of it with a lighter, greyish cast, and often a peculiar metallic sheen." Such a description would fit the colour of some upvalley sherds, for example, the spout in fig. LXXXVII c, and the plate in fig. XCIV m. But this is not to say that they are

Chimú imports, particularly the plate with its stamped rim. It does suggest that the difference is due to different centres of manufacture and maybe individual firing practices.

Of further interest is the refiring of chips taken from upvalley sherds. These were taken from a Black Ware bowl lug, some fine spouts and from the modelled face in fig. LXXXVIII b. They were placed in an oven at a temperature of over 800° C. All came out a light brown/buff colour, similar in appearance to the buff paste used for Cuzco polychrome upvalley. All of them, bar the chip from the face, showed a lightly burnished unpigmented surface, whereas the former showed a deep red slip with a burnish¹. At present, a larger sample of chips will have to be refired in order to know what proportion of vessels were slipped in this fashion. It should be noted that the black effect was also obtained by using a black slip and firing in oxidising conditions, like a normal piece of Cuzco polychrome (fig. LXXXVIII c). Here the colour of the Chimú-looking monkey is a grey/black (Munsell 7.5YR N.3), whereas the paste is a light reddish brown (5YR 6/3). Spindle whorls (fig. C a-h) were treated in the same way as the monkey.

Incised decoration was always made while the clay was still plastic, before the final drying and firing. It was executed with a sharp pointed instrument such as a metal awl (fig. CIV h), or a bone one (fig. CII d). After firing the incisions were filled with a resin-based paint in bright red, yellow and a chalk white. These paints have often vanished from worn sherds, but in some instances the original colours can be traced and have been indicated on the figures. This colouring, however, was never executed on the collars of small jugs, such as those in fig. LXXXVII a, but only on the exterior of bowls, ollas and two-handled dishes.

Most of this ware has been included in the Pachacamac Inca style by Menzel (1966, p.112). She has defined it as a combination of imitation Inca features and features of local invention combined in forms not found in the Cuzco Inca style. This is not correct, as Cuzco forms do occur in the style combined with novel forms of decoration, such as incision and post-fired resin painting, and extra modelled appendages. For example, Uhle (1903, plate 13, fig. 1) shows a black aryballus with two large protuberances sprouting from its upper shoulder. The distribution of the style indicates its prestige, since it is found either imported or in imitations from Ancón down to Ica (Menzel 1966, p.123; 1976, p.122; 1977, pp.28-29. Reiss and Stübel 1880/87, plate 100, fig. 9). It may also have been imported at Machu Picchu (Bingham 1930, p.161, fig. 111). Except for the last, the distribution is purely coastal, for I have not yet seen a piece from a site upvalley from Sisicaya. It also had origins in the LIP, as will be seen in the discussion of the specific forms.

NOTES

- 1 See also Muelle's comment (1954, p.189), previously cited, about the possible use of specular haematite paint to achieve a metallic sheen for Black Ware, as well as for red-painted ware, depending on the firing conditions. The duck head illustrated by Strong and Corbett (1943, fig. 9d) has a considerable luminescence unlike any other piece of Black Ware in the collections. This would support Muelle's view.

Black Ware - jars

Sample - 189 sherds
(24 rims and 165
body sherds)

Figures LXXVII -
XC a - b

This category includes a variety of shapes. Sherd numbers for each shape are so small that it was not worth while giving a separate classification for each of them.

A. Description

1. From the number of sherds these are common forms, but most of the sample consists of plain body sherds that are known to be from jars because of their interiors. A few of these are from the very fine paste, but the majority are of the thicker paste.
2. They are found in all sectors of the study area, although there are fewer from surface collections in Huaycán. Jars are also found at Pachacamac (Uhle 1903, plate 13, figs. 1-3, 8-11, 13-15; plate 18, fig. 12; p.63, figs. 68-70; p.64, figs. 71-77). Nevertheless, it is interesting that Black Ware is rare in Strong and Corbett's excavations there, which one would not expect, given that Pachacamac is the centre of the style (Menzel 1966, p.112).¹
3. There are 35 sherds from surface collections and 154 from excavations. Of the latter sixteen come from Strong and Corbett's excavation and 45 from Patterson's. There are 62 from the Panquilma excavation and 31 from Avillay.
4. There are no complete vessels from the study area, but most fragments can be related to the complete vessels from Pachacamac, illustrated by Uhle and cited above. There are:-
a) face-neck jars from 12 to 14 cms in height, with a rim

diameter of 3 cms (fig. LXXXIX c); b) small, one-handled jugs with incised designs on small raised collars (fig. LXXXVII a). These are about 10 cms in height with a rim diameter of 3.50 cms; c) jugs in the shape of a fruit or vegetable (fig. LXXXVII b), with a single spout and an everted lip. These are about 12 cms in height with a rim diameter of 3 cms; d) vessels in the shape of an animal or fish with a stirrup spout (Uhle 1903, plate 18, fig. 11); e) double-chambered whistling vessels, each part with its spout that is usually joined to the other spout by a flat bridge. These are of similar heights and rim diameters to the other vessels discussed. One of the spouts is usually closed over at the top with a small bird or animal (Uhle op. cit., plate 18, fig. 12); f) jars that can be single or double-chambered, but that have press-moulded designs (Uhle 1903, plate 13, figs. 9, 10). At Pachacamac there is also the aryballus (Uhle 1903, plate 13, fig. 1).

5. The rim forms in the study area are usually spouts. They can be straight-walled as in the Chimu style (fig. LXXXVII d, h), or slightly flaring with the flare beginning a third of the way up the rim (fig. LXXXVIII g), or two thirds of the way up (fig. LXXXVII c, e). There is also a sharply outflaring rim and handle from a larger jar (fig. LXXXIX g).
6. The lip is either rounded (figs. LXXXIX g; LXXXVII c, d); slightly tapered (figs. LXXXVII h; LXXXVIII g); or sharply everted (fig. LXXXVII i).
- 7a. Rim diameters in the study area range from 2 to 4 cms for spouts. The jar in fig. LXXXIX g has a rim diameter of 6 cms, and another, slightly flaring, tall jar rim from 164 (not

illustrated) has a rim diameter of 12 cms. Vessel heights cannot be calculated for the Lurín, but it is reasonable to assume that they were similar to those at Pachacamac.

- 7b. There is no complete spout from the study area, but the partial ones were over 4 cms in height. Other jars had rims over 6 cms in height.
8. There are few handles in the Lurín sample, that can be positively associated with jar forms. Remnants of handles of a thin strap kind can be seen in fig. LXXXIX e and g. The spout in fig. LXXXVII c has a worn patch where the handle had its base. From Uhle's illustrations previously cited, handles were set on the upper shoulder or occasionally from rim to shoulder. They consisted of large loops that were usually vertically placed, but a few were horizontal (Uhle, op. cit., p.64, figs. 71, 75). Some take the form of animals or birds, but this trait is found on ollas rather than jars in the Lurín (fig. XCIII e). Bridges were usually flat and rectangular in cross section. These have been found in the study area and also the smaller, curved hollow bridge between the two chambers themselves (fig. LXXXVIII d). A nubbin or appendage in the Lurín is in the form of a monkey's head (fig. XC b). The monkey is also found at Pachacamac where it usually straddles a vessel or spout (Uhle op. cit., plate 18, fig. 12; plate 13, fig. 11).
9. There are a couple of Black Ware bases (not illustrated) and these are flat, as are those of Pachacamac jars. The base of a unique jar is illustrated in fig. LXXXVIII h. Black Ware aryballi had the usual pointed base (fig. XC a), but this form has not yet been seen in the study area².

10. As stated in the general discussion, the modelled face in fig. LXXXVIII b was given a slip before firing in a reducing atmosphere. It may have been the only vessel to have received such treatment, the rest being merely burnished before firing. There is no post-fired painting of incisions on these jars, unlike the other forms to be discussed.
11. The decorative techniques and the ways in which these were used on the various vessels are as follows:-
 - i) The moulding or modelling of the main part of the vessel in the form of a human being. Fig. LXXXIX d - f show oval and round eyes of such beings (although the round eyes could well belong to fish). Fig. LXXXVIII b shows an unusual face with punctations in the eyes and ears and a flanged headdress? behind the latter. Fig. LXXXVIII a shows the arms of some being clasping an object that has since worn away.
 - ii) The moulding of a vessel in the shape of a fish (fig. LXXXVII k) of which only the fins remain.
 - iii) The stamping of a vessel with a small "eye" design to simulate potato eyes (fig. LXXXVII n).
 - iv) The incising of small raised collars around the vessel neck (fig. LXXXVII m), or around a flange (fig. LXXXVIII f).
 - v) The moulding and/or modelling of a monkey at the base of a spout (fig. LXXXVII g), or on top of a spout (fig. LXXXVIII c).
 - vi) The modelling of a snake on the body of the vessel. This can be a thin curvilinear bas-relief as found on the bulk of LH Orange Ware forms (fig. LXXXVIII e);

or wider with small punctated protuberances that simulate markings (fig. LXXXIX h, i); or a band marked by light incision and filled with thick-line incised-bean shapes that may also simulate markings (fig. LXXXIX j).

- vii) Press-moulded decoration in the form of stippling (fig. LXXXIX k and l). One of these figures shows press-moulding combined with a fine-line incision of broken, zigzag lines.
12. The function of these vessels is purely mortuary, since they are always found in graves. Their small size precludes any cooking or other domestic functions.

B. Relationships

These are taken in the order of the decorative techniques as discussed above.

- i) The eyes resemble those of Black Ware face-neck jars from Pachacamac (Uhle op. cit., plate 13, figs. 2-3). The closest resemblance to fig. LXXXVIII a is in Mason 1964, plate 26 B, central figure³.
- ii) For fish-shaped vessels, see Uhle 1903, plate 18, fig. 11.⁴
- iii) For potato-shaped vessels see Uhle 1903, plate 18, fig. 12 and plate 13, fig. 15, which is reproduced here. See also Menzel 1966, plate XVI, fig. 73.
- iv) For bottles with single loop handles and incised collars see Uhle 1903, p. 63, figs. 69 and 79; p. 64, fig. 71. See also Menzel 1966, plate XV, fig. 64, for an example from Chíncha, and Reiss and Stübel 1880/87, plate 93, fig. 6, for an example from Ancón.
- v) For the monkey at the base of a spout see Uhle 1903, p. 65, fig. 78. Also Menzel 1977, fig. 44B for an LH

example from Moche. For the monkey on top of a spout see Uhle 1903, plate 18, fig. 12.

- vi) The snake modelled in this fashion on Black Ware has not been noted elsewhere.
- vii) Press-moulded decoration is found on Black Ware at Pachacamac, Uhle 1903, plate 13, fig. 9 and on Chimú and Chimu-Inca style vessels from the north coast. See Menzel 1977, figs. 37, 38 and 42; Mason op. cit., plates 26A and 26B.

C. Dating

The vessels discussed here are found consistently in association with the Cuzco style, both in excavations in the study area and at Pachacamac. They can all be related to the Pachacamac vessels excavated by Uhle. Fig. LXXXIX a and b show the form of the LIP Black Ware vessels excavated by Bandelier at Pachacamac. Fig. a shows a one-handled jug with a large flaring rim and a small animal crawling up the upper shoulder opposite the handle. This may be a snake, although it has an extremely large head. Fig. b shows a vessel similar to Orange Ware form VIIB. It also has the small loop handles of the LIP. No sherd from a jar resembling either of these has yet been found in the study area, with the exception of one rim from Chaimayanca which is not illustrated here. This rim flares gently outwards and has a diameter of 12 cms, similar to that of the vessel shown here. It may be from an LIP vessel, but it is the only one. All the other Black Ware sherds are LH.

NOTES

1. This differential distribution of Black Ware at Pachacamac confirms the fact that Inca influence was concentrated around the Temple of the Sun (and the Mamacuna) and was less felt at the periphery of the site. The Black Ware vessels illustrated by Uhle are chiefly from the northwest part of the site and there appear to be only two from the Cemetery of the Sacrificed Women at the Temple of the Sun. For all the volume of their excavation there, Strong and Corbett (op. cit., Table 2) only found 231 Black Ware sherds (5.6%) out of a total of 4119 decorated sherds. The Cuzco-style sherds totalled 1243 (30%), more if one adds the 787 red-painted sherds which, by my re-analysis, are from the red panels of aryballi. Even Orange Ware sherds totalled some 961 (23%). All of this suggests that the Inca themselves did not regard Black Ware as a prestige item, although the coastal rulers did.
2. A local huaquero told me that a friend of his had found one at either site 57 or Panquilma.
3. Mason, in his list of acknowledgements (op. cit., p.xx), states that most objects in the photographs are from the University Museum Collections in Philadelphia. In fact, many of the vessels illustrated in plates 26 (Late Chimú black-ware) and 35 (Inca-type vessels) come from Pachacamac and may be compared with the vessels in Uhle's plates.
4. Uhle, op. cit., p.94, gives the impression that this vessel is Black Ware, but Mason's later photograph (op. cit., plate 35) shows that the spout, fins and tail are white and that the body of the fish is slipped black, rather than fired in a reducing atmosphere.

Black Ware - two-handled dishes

<u>Sample - 99 sherds</u> (47 rims and 52 body sherds)	<u>Figure XC c - j</u> <u>Figure XCI</u>
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A. Description

1. This is a less common form, although there are twice as many dish rims in the collections as there are jar rims.
2. It is found in all sectors of the study area and at Pachacamac. Most examples come from the Panquilma excavation.

3. There are eighteen sherds from surface collections and 81 from excavations. Of the latter, ten come from Patterson's excavation and eight from Strong and Corbett's. There are two from Avillay and 61 from Panquilma.
4. There are no complete specimens from the study area or from Pachacamac. The largest sherds to give a reasonable idea of the vessel's shape come from Panquilma and site 110 (fig. XC c - e). These show a shape that reproduces the standard one of the Cuzco style. There is the same small, outflaring rim, the walls that curve out gently towards the exterior from the neck, and the corner point that introduces the inward slope to the base, which is flat. There is as much range in wall profile as in the Cuzco dishes. All of the Black Ware dishes have smooth, burnished interiors, which distinguish them from the olla category (q.v.). The handles are horizontal and set from 1 to 1.50 cms from the neck exterior (fig. XC d - e). The decoration is confined either to the rim interior (fig. XC f - j) or to the vessel exterior (fig. XCI).
5. The rim form is similar to that described for the Cuzco-style two-handled dishes. There is a similar variation in the angle of the flare and in the length of the rim. (c.f. fig. XC e, f with fig. XC d, h).
6. The lip is rounded (figs. XC c, j; XCI a), and usually tapered as well (figs. XC e, h; XCI b, m). Rarely is it slightly flattened (fig. XC g).
- 7a. The rim diameters vary between 12 and 20 cms, although the majority were between 16 and 18 cms. The average vessel height was around 8 cms.
- 7b. The height of the rim varied between 0.20 and 1.30 cms.

8. Handles varied in width between 2.10 and 2.25 cms. They were usually plain, but there is an unassociated handle, probably from one of these dishes, with an incised lattice A design on it (fig. XCI l).
9. Bases were always flat.
10. One chip for refiring was taken from a dish and this showed no sign of a slip. Designs were incised on the rim or on the exterior before the final burnish and before firing. After firing the lines or the stamped designs were filled with a combination of red, yellow and white paints. These have mostly worn away, but some traces remain. I have yet to note this post-fired painting at Pachacamac, but the sample from that site is very small.
11. The decorative possibilities are as follows:-
 - a) for the rim interior:-
 - i) Stamping with the end of a reed or a cane to leave small circles, 0.40 cms in diameter, at intervals of about 3 cms (fig. XC h).
 - ii) Incising single or double zigzag lines around the rim and filling in the intervening spaces with dots or dashes (fig. XC f, i, j).
 - iii) Incising a combination of circles, lines and curves to give the impression of interlocking birds' heads (fig. XC g).
 - b) For the body it should be noted that the decoration is enclosed in a horizontal panel outlined by a double incised line. The decorative possibilities are:-
 - i) Stamping within the panel in a random manner, using tiny, stylised designs of humans (fig. XCI h) and birds and fish (fig. XCI m).

11. b) ii) Incising triangle designs with cross-hatching inside (fig. XCI a).
- iii) Incising concentric diamonds (fig. XCI c, i).
- iv) Incising combinations of stepped lines and circles (fig. XCI d, g, j).
- v) Incising broken zigzag lines (fig. XCI b, k).
12. Their small size and elaborate decoration suggest a mortuary function similar to that of black bowls.

B. Relationships

Uhle's collections do not contain incised dishes or bowls, but there are a couple of incised ollas. Strong and Corbett illustrate three fragments from Pachacamac (op. cit., fig. 11, a, d, e): one plain dish, one dish with an incised panel and one body sherd with a stamped design. The relationships of these dishes are to the incised Black Ware bowls from Chincha and Ica¹, but this relationship concerns design elements and post-fired painting, not shapes, for there are no Black Ware two-handled dishes yet reported from those valleys. The design elements will be discussed in the bowl category that follows.

C. Dating

The finding of incised Black Ware dishes in Strong and Corbett's excavation suggests an LH date. The incised Black Ware from Chincha and Ica is also LH (Menzel 1966, p.117; 1976, pp. 120-121).

NOTES

1. Kroeber and Strong 1924, plate 13a - c, and fig. 5 together with Menzel 1966, figs. 68, 77, illustrate the Chincha Black Ware. For Ica see Menzel 1976, plate 54, fig. 53 and 1977 figs. 22, 23.

Black Ware - bowls

Sample - 72 sherds
(54 rims and 18
body sherds)

Figure XCII
Figure XCIII a - d

A. Description

1. This is a less common form but three quarters of the sherds are rims.
2. Bowls are found in all sectors of the study area, but they are noticeably few in the Chontay and Sisicaya sectors, when compared with the number from Huaycán. There are some from Pachacamac.
3. There are eleven sherds from surface collections and 61 from excavations. Of the latter, one comes from Patterson's excavation at Pachacamac and ten from Strong and Corbett's. There are 49 sherds from Panquilma and one from Avillay.
4. Although there are no complete specimens from the study area or from Pachacamac, some sherds are sufficiently large to give a good idea of the shape (fig. XCII a). These show a shallow, slightly enclosed bowl with its maximum diameter at the mid-point of its height, from where the vessel wall curves inwards to a rounded base. Sometimes this point of maximum diameter is signalled by a carination (figs. XCII b, g; XCIII a). There is no corresponding corner point on the interior, which is always smooth and burnished. Most bowls are decorated in some way, with modelling or incision and some possess small incised lugs (fig. XCII d, h, i), or handles (fig. XCII g).
5. This is not applicable.
6. The lip is rounded (figs. XCII c, d; XCIII d), and usually tapered (figs. XCII a, b, e; XCIII a - c).

- 7a. Rim diameters range from 12 to 22 cms, the majority being around 12 cms. The vessel height was approximately 7.50 cms or less.
- 7b. This is not applicable.
8. The only handles are of the lug type. One bowl, however, has a flange running all the way round its maximum diameter (fig. XCII c). Other bowls had two squarish or half moon-shaped lugs with a few vertical incisions on the upper face (fig. XCII d, h, i). Another had a small handle in the shape of an animal head, although the top part of the head has broken off (fig. XCII g).
9. Bases were always rounded (fig. XCII a).
10. The bowls were not slipped but well burnished, with visible horizontal tracks. Incisions in the lugs and the body were painted red, white and yellow after firing.
11. The decorative possibilities for these bowls are as follows:-
 - a) A modelled bird or reptile on the upper third of the bowl, just below the lip. This can take the form of a cormorant (fig. XCII e), a frog (fig. XCII f) or an undulating snake (fig. XCII a, b).
 - b) Stamped decoration on the upper third of the bowl. This takes the form of a cluster of dots (fig. XCII h).
 - c) Incised decoration along the upper third of the bowl, usually inside a horizontal panel outlined by incised lines. This decoration can be:-
 - i) A group of broken zigzag lines running horizontally across the panel (fig. XCIII c). They can be interspersed with dots (fig. XCII g).
 - ii) A lattice B design with concentric incised circles in the diamonds formed (fig. XCII j).

11. c) iii) Concentric diamonds (fig. XCIII a).
 iv) A stylised fish (fig. XCIII b).
 v) A fret design (fig. XCIII d).
12. These small, black bowls have been called "yarn bowls" by Kroeber and Strong (1924, p.15) because yarn was found in them in Chincha graves. They are given a similar function by Ravines and Stothert (1976, p.164; Stothert 1978, p.13), who found a similar bowl in a work basket containing spindles, whorls and thread. The work basket was found inside the wrappings of a mummy from Ancón. It is suggested that the bowl was used in spinning as a repository for thread. It is likely that the Lurín bowls had the function suggested.

B. Relationships

At present there are no incised bowls from Pachacamac, only ones with the modelled snake (fig. XCII a). On the other hand the incised ones are found to the north at Ancón and to the south at Ica and Chincha. Stothert states that the one she found in the mummy wrappings from Ancón was similar to the one illustrated by Reiss and Stübel (1880/87, vol. III, plate 100, fig. 9). This bowl is more open in shape with slightly outflaring walls. The design, however, is generally similar to Lurín ones, being a zigzag line with interspersed dots.

There are four vessels from Chincha excavated by Uhle (Kroeber and Strong, op. cit., p. 15, fig. 5; plate 13). The first is termed a dish by Menzel (1966, p.116) and considered to be an imitation Ica 9 vessel. Its shape is close to what she calls "angular rim bowls" which means that it has a small flaring rim. Such bowls are taller than their Lurín counterparts and the Chincha

vessel is incised with a variant of lattice A design, with small incised circles in the triangles. The other three vessels are properly bowls, but still unlike the Lurín ones in their very angular shoulder and small nubbins on either side, that represent shells (Menzel 1966, pp.117-118)¹. One has a zigzag incision on the lip, like the Black Ware ollas to be discussed. Otherwise the design area is the upper shoulder and, as in the Lurín, it is executed within a horizontal panel. The elements are stepped lines, circles, dots, rectangles and vertically-hatched squares, but they are not combined in quite the same way. The design on the third bowl features a bird with a fish in its mouth, together with a typically Ica motif, that is,tailed rectangles in a zigzag formation.

From Ica there are six bowls and dishes in Black Ware that are decorated with incised designs (Menzel 1976, plate 52, fig. 45; plate 54, fig. 53; 1977, figs. 25a, 25b). Unlike the Lurín specimens they all have a small flaring rim. Again designs are similar to those found in the Lurín, since they consist of large cross-hatched diamonds filled with dots, cross-hatched rectangles and large horizontal bands filled with diagonal zigzag lines. There are no incised lugs, modelled birds or reptiles on the Ica bowls.

C. Dating

The finding of Black Ware bowls in Strong and Corbett's excavation together with their LH associations at Chíncha and Ica argue for an LH date in the Lurín.

NOTES

1. Menzel (1966, p.117) states that Chinchu bowls are not a faithful copy of Pachacamac Inca ones. However, the Pachacamac Inca ones she discusses fall into my "olla" category, i.e. they have a rough, unburnished interior. She is wrong in saying that such bowls (my ollas) are not decorated with incised designs (see fig. XCIV a, d, e), possibly because she saw only a small sample.

Black Ware - ollas

Sample - 12 sherds Figure XCIII e
 (11 rims and 1 body Figure XCIV a - e
 sherd) see Note 1.

A. Description

1. This is a very rare form.
2. It is distributed sporadically over the study area and Pachacamac, there being a single example from a couple of sites in the Chontay and Sisicaya sectors, a few from Panquilma and a few from Pachacamac.
3. There are five examples from surface collections and seven from excavations. Of these, four come from Panquilma and three from Strong and Corbett's excavations. There are no examples from Avilley, nor from Patterson's excavation.
4. There are whole vessels from Uhle's excavations at the Temple of the Sun, plus some large sherds from the study area (figs. XCIII e; XCIV a). These show that the form is the equivalent in Black Ware to form I in Orange Ware. It is an enclosed vessel with a roughish interior and a neck orifice about three quarters of its maximum diameter. The lip is thickened by drawing the clay up and out. There are two vertical handles that extend from the lip onto the upper shoulder. The upper part of the exterior, before the point

of maximum diameter, carries an incised or stamped design.

Sometimes the lip exterior also carried an incised design (fig. XCIV d). The stamped or incised designs could be filled with post-fired pigments (fig. XCIV e).

5. This is not applicable.
6. The lip is thickened and usually flattened on the exterior to give a separate strip from 0.40 to 0.55 cms wide.
- 7a. Rim diameters vary from 10 to 16 cms. The vessel illustrated in fig. XCIV a was about 13 cms in height.
- 7b. This measurement is not applicable here.
8. There are two examples of associated handles. Fig. XCIV b shows the normal vertical strap handle, also found in specimens in the Uhle collections. It is 2 cms wide. The handle from Avilley (fig. XCIII e) is tubular and modelled in the shape of a bird, probably a cormorant, with incisions to show the eye and the beak.
9. From the specimens in the Uhle collections the base was rounded.
10. There was no slip on these vessels, but after firing, as with dishes and bowls, a resin-based pigment was applied to the incisions. On the sherd illustrated in fig. XCIV e, there is evidence for two colours, red and white, although yellow was probably used as well.
11. The decorative possibilities are as follows:-
 - a) for the rim:-
 - i) Plain (figs. XCIII e; XCIV a, b, e).
 - ii) Incised with a broken zigzag line interspersed with tiny circles (fig. XCIV d).
 - b) for the body:-
 - i) An incised decoration consisting of a double zigzag line (fig. XCIV a); a fret design with rectangles

11. b) i) cont.

(fig. XCIV d); or large incised triangles filled with zigzag or stepped lines and rectangles (fig. XCIV e). The latter two designs were enclosed within an incised rectangular panel.

ii) An overall stamped design consisting of either fishes (fig. XCIV c) or birds (fig. XCIII e).

The latter were encased in small diamonds.

12. Uhle's vessels came from graves in the Temple of the Sun, so that the function of these vessels is mortuary.

B. Relationships

The similarity in shape to that of Orange Ware form I (fig. XX) has already been noted. At Pachacamac the ollas seen by Menzel (1966, p.117) had small press-moulded figures in the sides and/or appliqué maize ear lugs. Those in the Uhle collections at Philadelphia are incised as described above. The designs are related to those of the two-handled dishes in particular (fig. XCI). The incised zigzag band calls to mind the one in red on the pedestal base olla (fig. LXXIX b). Elsewhere there is no similar shape in Black Ware.

C. Dating

These vessels are found at Pachacamac in LH contexts such as Uhle's and Strong and Corbett's excavation.

NOTES

1. This body sherd has been inadvertently excluded from Chart I.

Black Ware - platesSample - 7 sherds
(6 rims, 1 body
sherd)Figure XCIV f - mA. Description

1. This is a very rare form.
2. The distribution is restricted to three carefully studied sites: Pachacamac, Avillay and Panquilma.
3. All specimens come from excavations. There are four from Pachacamac, two from Panquilma and one from Avillay.
4. These plates are similar in form to those of the Cuzco style made from buff and orange pastes. There is no complete specimen, but large sherds from Pachacamac show that both kinds of plate were made (fig. XCIV f, h). In other words, there were plates with a flat base and outflaring walls showing a convex interior and concave exterior profile (fig. XCIV h) and those that were gently curved like a bowl (fig. XCIV f). In addition, this category also includes some deeper plates (fig. XCIV i, k, m), one of which has a thickened, everted lip (fig. XCIV i). All of the plates in the sample are undecorated but burnished on the interior and exterior. Some were incised or stamped on the lip (fig. XCIV j, m). Strong and Corbett illustrated a Black Ware plate with incised decoration in the form of triangles around the rim interior (1943, fig. 11c). They also illustrate a handle from the second kind of plate (op. cit., fig. 9d).
5. This is not applicable.
6. The lip is either flattened (fig. XCIV g, h, j, m); tapered (fig. XCIV f); rounded (fig. XCIV k, l); or thickened and everted (fig. XCIV i). The first two are the usual methods of finishing a lip.

- 7a. The rim diameters for this small sample vary between 8 and 20 cms, but four of these rims are between 14 and 16 cms. The height of the plates varies between 3.10 cms for the plate in fig. XCIV h and over 4 cms for the shallow bowl-type in fig. XCIV j.
- 7b. This measurement is not applicable.
8. The only handle is from Strong and Corbett's excavations and this has the form of a bird's head. Plates like those in fig. XCIV h will have had pairs of small opposing lugs, as did Cuzco style plates, but these have not yet been found.
9. Bases are flat (fig. XCIV h), although those of the shallow open bowls may have been gently rounded.
10. The bird head mentioned may have had a slip with a specular haematite content to give it considerable sheen. The rest have the usual burnished surface of Black Ware, although it is not as bright as for the fancy jars.
11. Only three plates in the sample had some form of decoration. The possibilities were as follows:-
- a) for the rim:-
 - i) A stamped design like a tiny gun with a dot in it, impressed along the rim at intervals (fig. XCIV m).
 - ii) A zigzag line with small dots interspersed (fig. XCIV j).
 - b) for the body:-
 - i) A design of interlocking triangles incised as an interior rim band and bordered beneath by a double incised line (Strong and Corbett, op. cit., fig. 11c). There is no indication that there was any post-fired painting of the incisions, as on bowls, dishes and ollas, but the sample is too small to be certain on this point.

12. As with other Black Ware, the association of plates with grave refuse makes it likely that their function was purely mortuary.

B. Relationships

To my knowledge the only other Black Ware plates occur on the south coast in graves excavated by Uhle. These have been subsequently studied by Menzel, who finds two groups that she calls B-1 and B-2 (1976, pp.72-74). Both groups belong to the concave interior, convex exterior type. The first group, B-1, is within the Imperial Inca size range and usually does not possess handles, although one set does (*ibidem*, fig. 208 (with handle); fig. 209 (without handle)). The second group can be made of oxidised ware as well and is usually deeper than the first group, and without handles or lugs. What is most interesting from the point of view of the Lurín sample is that one unique pair of plates (unique because of surface treatment, lip and base) has an incised cross-hatched design on the lip and the incisions are filled with red paint. Unfortunately she does not illustrate these, but they are the closest to the ones in our sample.

C. Dating

For the same reasons as the bowls, dishes and ollas, these plates are all dated LH.

Black Ware - miniature bowlsSample - 15 sherdsFigure XCV a - k, oA. Description

1. This is a very rare form which, in this sample, occurs in excavations rather than in surface collections.
2. It is found sporadically in all sectors of the study area, there being a sole example from one site per sector in the surface collections.
3. There are four examples from surface collections and eleven from excavations. Of the latter there are two from Patterson's excavation and one from Strong and Corbett's. In addition there are six from the Panquilma excavation and two from Avillay.
4. There is an almost complete specimen from Strong and Corbett's excavation (fig. XCV a), but not all the other bowls are similar. Firstly, there is an open or slightly enclosed shallow bowl with curving walls and a rounded base (fig. XCV a - d). Secondly, there is a bowl with straight walls meeting the base at almost a right angle (fig. XCV e - f). Thirdly, there is a small bowl with curving or straight walls and a small flaring rim, which is often decorated on the interior (fig. XCV g - k, o). These three shapes can also be found as form XIV in Orange Ware. Only the third group has small handles (fig. XCV g), or lugs (fig. XCV i). Decoration is either on the bowl exterior or on the rim interior (fig. XCV b, e, f, g, h, o).
5. In the third group of bowls the rim takes the form of a small flare extending outwards at a right angle, or a little over,

- from the neck interior. The exterior neck angle is always obtuse. The rim varies in length from 0.70 to 1.10 cms.
6. In the first group of bowls the lip is rounded and slightly tapered (fig. XCV a - d). In the second group it is either flat (fig. XCV e), or rounded and slightly tapered (fig. XCV f). In the third group it is rounded (fig. XCV g) or rounded and tapered (fig. XCV h, k, j).
 - 7a. The rim diameters vary between 4 and 8 cms, the majority being between 5 and 6 cms. Vessel heights vary between 2.40 and 4 cms.
 - 7b. In the third group rim heights vary between 0.15 and 0.50 cms.
 8. There is one example of a small handle. This is vertical and extends from the lip to just below the neck, in the manner of the Orange Ware miniature bowls (fig. XCV g). Another bowl has a large lug (fig. XCV i), which is similar to those found on other bowl categories in the Lurín. It is incised with a minimum of four slashes.
 9. The base was either rounded (fig. XCV a) or slightly flattened (fig. XCV e, f).
 10. Many of these miniature bowls were plain, poorly burnished and patchily fired, so that they are a greyish-beige in places. There is no evidence for any slip. Some had red and white pigments painted in the incisions after firing.
 11. The decorative possibilities are as follows:-
 - a) for the bowl exterior:-
 - i) A modelled snake running around the exterior, as for the larger Black Ware bowls (fig. XCV b).
 - ii) Incised decoration consisting of a fish design with circles (fig. XCV e), or wavy and straight lines with circles (fig. XCV f).

11. b) for the rim interior:-

i) A single or double zigzag line interspersed with slashes or circles. It can also be a broken zigzag line with incised circles in the triangles formed and small groups of vertical lines (fig. XCV g).

c) for the lugs:-

i) Vertical incised lines filled alternately with red and white paint (fig. XCV i).

12. Their association with grave refuse at Pachacamac and inferred grave refuse from elsewhere in the study area suggests a mortuary function. Miniature vessels in all standard shapes are also found at Ica in the graves Uhle excavated, especially in those of phase 6 (Menzel 1976, pp.34-35).

B. Relationships

There is little published on Black Ware miniature bowls, although Uhle illustrates an Orange Ware one from Pachacamac (1903, plate 18, fig. 10), that has already been discussed. Their obvious counterparts in the Lurín are the Orange Ware ones which are decorated in a similar fashion. At Ica Menzel (*ibidem*) states that the miniatures were made of Black Ware as well as plainware, although both kinds are poorly proportioned. On the other hand, although these miniatures exist in Ica 6, there are none for phases 7, 8 (for which she has very small samples) or for phase 9, which is the LH. I have no knowledge of other examples from nearby valleys such as the Rimac. They probably exist but have not been thought worthy of mention.

C. Dating

Their association with the other incised Black Ware forms in the Lurín makes an LH date certain. In this connection it is worth remembering that on the south coast the incised Black Ware with post-fired painting is all LH (Menzel 1976, p.121). Unincised Black Ware can be found in the LIP, both on the south coast and in the Lurín. Interestingly enough there are cases in the south coast where this is decorated with post-fired painting (Menzel, op. cit., pp.86, 121), so that this technique precedes that of incision.

GLAZED WARE

This ware is not common in the valley and marks Colonial, Republican and Modern occupations. We are here concerned with the Colonial variants. There are only a few sherds and these show that both jars, bowls and plates were manufactured. From the lines that appear on the surface, which are similar to those pictured on Colonial ware from the highlands, it is obvious that these vessels were turned on the wheel (Martínez-Caviró 1976, p.103, lamina 5 a-c). What also distinguishes them from pre-Columbian vessels is their primitive glaze.

There are two kinds of paste used, one coarse and one fine. The coarse paste is from 0.60 to 0.70 cms thick in vessel walls and from 0.85 to 1.80 cms thick in rims. Inclusions are visible both in the core and on the surface. They are evenly spread out in the paste and are not as dense as they are in the buff paste, averaging about 0.20 mms in diameter. The texture is smooth and the breaks are clean without jagged edges. The paste is fired to a light orange colour, sometimes with a very light grey streak in the core. Both core and surface have the same colour, that varies between a pink and a cream: Munsell 10YR 7/4 or 7.5YR 7/4. The other paste, which is used mainly for plates and bowls, is finer with hardly any visible inclusions and these only 0.10 mm in diameter. Body sherds average 0.45 cms thick. There are presently no rim sherds in our sample. Breaks are clean and the sherd edge is very smooth to touch. The paste is fired to a deeper orange than the previous one, and there is never a grey streak in the core. The colour for core and surface is the same: Munsell 10R 5/6 or 2.5YR 5/6.

The narrow-mouthed jars are made of the first paste and were slipped a creamy white on the exterior before glazing (Munsell 10YR 8/3 to 8/4). The glaze which covered the exterior and the rim interior was an olive green colour (Munsell 5Y 6/3), with tiny brown specks that are probably due to some ferrous material (Robert Sonin, personal communication, January 1979). The forms made from the second paste are unknown, but the glaze and the interior decoration suggest that these were plates. The surface colours were Munsell 5Y 7/2 and 7/6 and the decoration was a dark brown (Munsell 2.5Y 3/2) and an emerald green (not reproduced in Munsell charts). The glaze is clear without specks (figs. XCVI f and g). The nearest sherds to the latter are found in the material from Chinchero (Martínez-Caviró op. cit., lámina 10b). Martínez (op. cit., pp.104-105) states that these pieces at Chinchero have a manganese-based pigment for the brownish black and are covered with a colourless lead glaze. There are not enough fragments in the Lurín samples to give a clear idea of the designs on the plate.

Glazed Ware - jars

Sample - 48 sherds
(6 rims, 42 body
sherds)

Figure XCVI a - e

A. Description

1. This is a rare form, with few rims in the sample.
2. It is only found in the Chontay and Sisicaya sectors of the study area. It is not found at Pachacamac or at Huayacán.
3. There are 42 sherds from surface collections, all from the Chontay and Sisicaya sectors, and six from excavations at Avillay.

4. There are no complete vessels, only rims and a few body sherds, and it has not yet been possible to reconstruct the vessel body. The jar, however, was narrow-mouthed with a flaring thickened rim.
5. The rim form is variable, as can be seen in fig. XCVI a - e. Fig. a shows an outcurving flare without a sharp interior corner point at the neck and a lip with an exterior bevel. The other examples are thickened towards the lip. Two have convex interior profiles and two have slightly concave interior profiles (fig. XCVI d, e). Fig. d is thickened at the lip like a comma and the others show an exterior bevel at different angles.
6. Lip treatment varies from flattening to achieve the exterior bevel (fig. XCVI a), or thickening with slightly rounded edges at the bevel (fig. XCVI b, c, e).
- 7a. Rim diameters vary from 8 to 12 cms.
- 7b. Rim heights vary from 3.50 to 4.10 cms.
8. It is not known whether there were handles. None have yet been observed at sites like 136, which yielded a large quantity of Colonial pottery. On the other hand Martínez-Caviró (op. cit., lámina 9b) illustrates several handles, which seem to be either strap or tubular.
9. The base is not known. From the illustrations in Martínez-Caviró (op. cit., lámina 6a) it may well have been a small pedestal base.
10. There was a cream slip given before the greenish glaze.
11. There was no decoration on these jars.
12. At present one must be cautious about their function. At site 136 sherds are found in both the residential and the

ceremonial sections of the site, so that these jars may have had both domestic and ceremonial functions.

B. Relationships

There is little comparative material from elsewhere, for example, the pottery in Ica 10, which belongs in the Colonial Period, has no glazed ware. The closest sherds come from Chinchero and have already been cited, but a great deal of the Chinchero Colonial pottery has a white background and decoration in green, yellow and brown, which is not true of the Lurín, where the background of these jars is creamy where the glaze has worn off and greenish where it is still there.

C. Dating

Martínez-Caviró dates the Colonial pottery she illustrates as belonging to the 16th and 17th centuries (op. cit., p.105). We know from the Relaciones Geográficas (Dávila Briceño 1965) that the province of Yauyos, to which the Lurín valley belongs, was reduced by 1586, by which time the inhabitants of the Chontay and Sisicaya sectors should have removed to San Francisco de Sisicaya, where the modern village is. They may have come back to these sites to carry out various rites, but by the early 17th century Dr Francisco Ávila, one of the most famous extirpators of idolatry, was active in the area and it is unlikely that such rites could have been too overt (Duviols 1966, pp.218-221). Therefore a date spanning the latter half of the 16th century for this pottery seems the most likely.

Glazed Ware - platesSample - 10 sherdsFigure XCVI f - gA. Description

1. This is a very rare form, for which no rim sherds have been found.
2. It is only found in the Chontay and Sisicaya sectors of the valley.
3. There are eight sherds from surface collections and two from excavations at Avillay.
4. At present there is no complete specimen from the Lurín.
5. The rim form is unknown. It was probably a plate or bowl rim, given that the decoration appears on an interior surface.
6. Unknown.
- 7a and 7b. Unknown.
8. It is unlikely that this form possessed handles.
9. The base was probably flat.
10. Decoration was in two kinds of green or a brown on a green surface with a colourless glaze.
11. The designs seem to be composed of straight or slightly curved bands.
12. It has been found in grave refuse and in refuse near looted tombs, as at site 88. Its function is likely to have been ceremonial.

B. Relationships

At present the only relationships seem to be with the previously mentioned Colonial glazed sherds from Chinchero. It is of interest that although Colonial burials from Chincha and Ica may contain glass beads, they contain no glazed pottery (Uhle 1924). Excavations at Fundo Pando in the Huaca La Rosa

have revealed a much later Colonial pottery, which is dissimilar to the sherds described here (Arrieta Alvarez et al., 1974/5, pp.163-165).

C. Dating

The same considerations hold for these forms as for the jars. They are found together in excavations, notably pit 10 at Avillay, and are likely to be of similar date. It is unlikely to be the early Colonial period, between 1532 and 1550, since sherds of this glazed ware would be found at Pachacamac and in the known Colonial burials from Chincha and Ica. A late 16th century date therefore seems probable.

APPENDIX II

THE EXCAVATIONS

The purpose of this appendix is to give an interpretation of various excavations, the results of which have been used to date the pottery found in the Lurín study area. The most important excavations are those that have taken place at Pachacamac, because it is there that the sequence for late pottery is best defined. An account of my own excavations in the Lurín is also given because, although the majority of material excavated belonged to the LH, they nevertheless provide certain indications as to the dating of pottery and structures and to the interpretation of the function of these.

A. The Rimac Valley

I. Maranga

Excavations at this site have been considered because they show that white on red decoration precedes the LH in the Rimac valley, a fact that it has not yet been possible to demonstrate for the Lurín, although it is inferred that it did so¹.

Description

The site consists of several large mounds or Huacas between Lima and Callao (G.M.I.). Middendorf (1973, p.57) gives a plan of these mounds, which most excavators have used, although he calls

the site Huadca. Uhle excavated in one of them and found several large MH storage jars (1908, fig. 14). In 1925 both Jijón y Caamaño and Kroeber excavated in the same mound, Huaca III, publishing their results with an emphasis on the Lima and Nievería styles of pottery². Jijón y Caamaño also excavated in three other mounds: Huacas I, II and IV, which are of greater interest here, since most of the vessels are late³. His most extensive excavations were in Huaca III, where he uncovered structures dating back to the late EIP, and four cemeteries or burial groups (Patterson 1966, pp.110-111). Cemetery 2 contained 36 burials, mostly extended, with associated vessels in the Lima and Nievería styles and a couple of intrusive Chancay Black on White vessels. Cemetery 1 contained 23 burials, all mummies, some without associated vessels and some with Chancay Black on White vessels. None of the finds from this cemetery was illustrated. The remaining cemeteries, 3 and 4, are more important since Cemetery 3 yielded 56 burials associated with a variety of late styles and Cemetery 4 had 71 burials similarly associated. A selection of grave goods from the former is illustrated in figs. 27 - 48 of his 1949 book and from the latter in figs. 50 - 66. All the burials from Cemeteries 3 and 4 contained mummies. He excavated two cemeteries in Huaca I, the first on an upper terrace to the west and the second on the south platform. The burials all contained mummies, Cemetery 1 containing 109 burials and Cemetery 2 89 burials. Selected grave goods from Cemetery 1 are illustrated in figs. 69 - 95, and from Cemetery 2 in figs. 96 - 102 of the same work. Only one cemetery in Huaca II was excavated and this yielded 8 burials, all mummies, but with scant grave goods, none of which is illustrated.

Finally, in Huaca IV at the east end of the north side, he excavated a small cemetery containing 25 burials, all of which contained mummies and associated grave goods, a few of which are illustrated in figs. 105 - 106 of his report.

Analysis

Patterson (*ibidem*) has made a preliminary analysis of some vessels and sherds from the fill and the graves of Huaca III. He dates these from the late EIP to the early MH (Lima 6 to Nievería). No one has yet re-studied the late vessels from cemeteries 3 and 4 of Huaca III and from Huacas I and IV. In spite of the poor illustrations and the difficulty of reconciling Jijón y Caamaño's burial descriptions with his plans and elevations, it is possible to make some deductions about contemporaneous styles. It should be also stated that I am assuming that each cemetery contains vessels from a particular time span, that these time spans may not necessarily coincide, but that each span is unbroken and without intrusion of vessels from very different points in time.

Neither cemeteries 3 or 4 of Huaca III contain LH pottery, i.e. vessels in the Cuzco or Pachacamac Inca styles. Neither do they contain EIP vessels (Lima style) or MH (Nievería, Pachacamac or Teatino),⁴ so that one may reasonably infer that the two cemeteries span a certain amount of time in the LIP. The same can be said of cemetery 2 of Huaca I and the cemetery of Huaca IV. As positive evidence for an LIP date, there is mention and illustration of Chancay Black on White vessels (Jijón y Caamaño, *op. cit.*, pp. 63-74, figs. 56, 60, 64, 65). These have the standard composite Chancay rims (cf. Kroeber 1926, plates 80-82). Cemetery 4 of Huaca III also contains a double-chambered vessel with a spout and bridge decorated in the Red, Black and White Geometric style (Jijón

y Caamaño, op. cit., p.85, fig. 58). Cemetery 3 contains a Black Ware jar with a bird's head projecting from the body (Jijón y Caamaño, op. cit., p.69, fig. 49). This is similar to an LIP Black Ware jar from Chíncha (Menzel 1966, plate IX, fig. 5). The flaring-rim jar from cemetery 3 is similar in form to those of the Bandelier collections (Jijón y Caamaño, op. cit., p.59, fig. 39; this thesis fig. XXVII b - d). In addition it possesses a white zigzag band around the rim interior. This zigzag band is found in press-moulded designs (Jijón y Caamaño, op. cit., p.58, fig. 37) and in painted designs on a tiered vessel from cemetery 3 (Jijón y Caamaño, op. cit., p.58, fig. 37). This vessel has zigzag bands in two shades of red and in white, the latter being filled with black dots. The design is comparable to that found on LIP vessels from Pachacamac (Uhle 1903, plate, 7, figs. 4, 5; plate 8, figs. 2, 9).

There are fewer illustrations of vessels from cemetery 2 of Huaca I and from Huaca IV, but they have forms comparable to the Lurín Orange Ware form VIIIB (fig. XLII a - c), which has been dated as LIP. There are press-moulded designs on vessels from both cemeteries and these are usually considered LIP (Stumer 1954, pp.220-221; Strong 1925, plate 44, figs. g, i). An important feature of these assemblages are the vessels decorated in white on red. This decoration consists of at least a white band around the rim and/or the vessel neck, plus a white band around the handle base. Some vessels also have a combination of white diagonal and vertical lines on the body. Vessel shapes are varied and include Orange Ware form VIIIB, vessels with composite "Chancay" rims and handles from rim to shoulder, vessels with a ring base and vessels with a flaring rim and horizontal handles (Jijón y Caamaño op. cit., pp.63-64; p.82, figs. 54, 55; p.133, fig. 97; pp.140-141, 154-156).

These should be contrasted with the vessels on which this style is found in the LH.

Such an assemblage comes from cemetery 1 of Huaca I. This is dated as LH because of a Black Ware aryballus with a face neck (Jijón y Caamaño, p.124, fig. 94); and Black Ware flasks (ibidem p.105, fig. 69; p.117, fig. 85). These should be compared with similar flasks from Pachacamac (Uhle 1903, pp.63-64). There is also a Black Ware jar similar to Orange Ware form IX in the Lurín, with a snake in relief (Jijón y Caamaño, op. cit., p.115, fig. 82); and a wooden bowl in the shape of a fish similar to one Uhle found in the Temple of the Sun excavations (Jijón y Caamaño, op. cit., p.111, fig. 79; Uhle 1903, plate 18, fig. 15); and a mould-made female figurine with holes drilled in the shoulder for suspension, similar to ones found in the Lurín in an LH context (Jijón y Caamaño, op. cit., p.107, fig. 72; this thesis, fig. XCIX b - d). The white on red decoration is the same as previously described, but in this assemblage it is found on form VIIIA, VIII and possibly a form VA vessel, in conjunction with press-moulded designs of rectangles, frets and zigzags (Jijón y Caamaño, op. cit., p.117, figs. 83, 84; p.119, fig. 87; cf. Uhle, 1903, p.66, fig. 84). There is also a white bird painted on the side of a Red Ware flask similar to the Inca-associated ones illustrated by Uhle for Pachacamac (Jijón y Caamaño, op. cit., p.113, fig. 80. Uhle 1903, p.66, fig. 86).

The above analysis has been made to show that white on red decoration in the Rimac valley antedated the LH. It should also be remembered that it dates back to MH 4 at Ancón (Menzel 1977, p.126, fig. 113A). In the Lurín it has not been possible to isolate it from the Cuzco style or Pachacamac Inca vessels, or to find it on LIP forms such as VIIB, although it is abundant at sites in the

Huaycán sector and at others lower down the valley. There are only a few sherds from LIP sites like 71, which have white paint daubed over the natural orange colour of the paste or over a red slip. However, there are not enough of these to show which decorative features are pre-LH and which LH. It is hoped that work at sites in the Cieneguilla and Manchay sectors of the valley will eventually resolve the problem. Another interesting point about Maranga is the lack of Cuzco-style vessels in the LH cemetery at Huaca I. This confirms a suggestion made previously: that where the Inca were not actually resident, their pottery had limited prestige.

NOTES

1. This late white on red decoration must not be confused with that of the EIP Miramar and Baños de Boza styles (Patterson 1966, pp. 5-29; Stothert 1980).
2. Jijón y Caamaño (1949) does discuss late material, but Kroeber (1954, p.11) remarks that he found 71 late mummies. Unfortunately he gives no further information on them.
3. Middendorf (ibidem) numbered the mounds from 15 to 19 on his plan. In Jijón's terminology Huaca III is the east part of mound 15 and Huaca IV the west part of the same mound. Huaca I is formed by mounds 16, 18 and 19, while Huaca II is mound 17.
4. These are cited as examples of styles that might reasonably be expected in a central coast assemblage. Jijón y Caamaño does find Inca influence in one vessel from cemetery 4 (p.80, fig. 53). I disagree with his view for the following reasons:- Firstly, Inca-influenced face-neck jars on the central coast usually possess stock facial features, such as elliptical eyes and mouth and a "beaky" nose - unlike those on this jar (Uhle 1903, plate 13, figs. 2-4). Secondly, they usually have arms and hands incised, painted or modelled on the front of the vessel (ibidem). This vessel has none. Thirdly, a painted zigzag band, as on this vessel, is not characteristic of the body decoration of Inca-influenced face-neck jars. Fourthly, it would be the only Inca-influenced vessel in a markedly LIP assemblage.

B. PachacamacS.P. 20

The purpose of analysing the following excavations at Pachacamac is to show the associations within time periods of plainware, less decorated ware and fancy vessels. This is crucial for dating sites in the study area where so much of the ceramic sample is plainware. Although these excavations yielded many other objects besides pottery, such objects fall outside the scope of this study and are not discussed here.

It should be stated at the outset that there have been other excavations at Pachacamac, material from which may be important, but which were not considered because the results are unpublished, or only partially published with little mention of ceramic material. In addition to the visitors of previous centuries mentioned by Uhle (1903, preface), at least four other people have excavated at Pachacamac. In 1939 Dr Albert Giesecke carried out some partial restoration of the Temple of the Sun. His ceramic collections were deposited in the Museum of Anthropology in Magdalena Vieja and a part of it was examined by Willey and Corbett in 1941. Willey's impressions were that Inca sherds predominated and that those of the Lima style were fairly numerous. He also states that he saw a Tiahuanaco sherd, plus a number of unusual sherds (Willey, field notes, 1941). In the 1940's Tello also undertook extensive excavations around the Temple of the Sun and restoration work at the Mamacuna. His collections were also deposited at the Museum of Anthropology and have been examined by Menzel (1966, p.126). Finally, in the 1950's and between 1963 and 1967 Arturo Jiménez Borja and Alberto Bueno continued clearing and restoring the west face of the Temple of the Sun and an LIP building known as JB, to the north of the Temple of Pachacamac. In addition, they excavated a small EIP structure opposite the

modern site museum. In 1967 and 1968 they cleared a large building to the northeast of the site (kkk on Uhle's map), behind the pueblo joven of Puente de Lurín. This has been called Tauri Chumbi. The few vessels in the site museum, that I have seen from this building, all appear LH. Bueno himself has assigned it to this period (Bueno 1978b, p.68; Jiménez Borja and Bueno 1970, p.18).

I. E.G. Squier

Description

These excavations were undertaken in 1864 during a ten-day stay at the ruins. He states that he explored a number of graves but does not give their location, merely mentioning the cemetery around the temple with three strata of graves. On the balance, his excavations are likely to have been in front of the Temple of Pachacamac, in what Uhle termed "Gravefield I" (see S.P. 20), for his description of the tombs as small vaults of adobes roofed with sticks or canes corresponds to those of Bandelier and Uhle for burials in that place. His account of one multiple interment can be found in two publications (Squier 1869 and 1877). What is of interest here is his brief reference to the pottery found in the tomb and his picture of it. He illustrates five vessels, all undecorated, and two sooted from use over a fire. All contained foodstuffs. Four of these vessels have counterparts in vessels from Bandelier's excavations (q.v.). In addition, there are four other vessels not illustrated by Squier, but stored with Bandelier's collections in the American Museum of Natural History, and catalogued as coming from Squier's excavations at Pachacamac. The likelihood is that they come from one of the other burials that he excavated¹.

Analysis

The vessel in the lower right hand corner of the illustration (1974, p.43) with its wide orifice, flaring rim and loop handles set at the point of maximum diameter, is similar to Orange Ware form VB-ii (fig. XXVII b - d). The vessel on the extreme right with a slightly flaring rim and handles extending from mid-point to the shoulder resembles variants of Orange Ware form VIIB (fig. XLII c). The centre and largest vessel has not yet been noted in the Lurín study area, but there are thirty-three examples from the Bandelier collections. The vessel in the lower left hand corner appears to have a straight collar and loop handles at the point of maximum diameter. It resembles Orange Ware form VI vessels (fig. XXIX b). All these forms have been dated as LIP. The only unusual form is the vessel on the extreme left with a broken spout. It appears to be a bottle standing on an annular base and with a single strap handle. There is nothing similar to this in the Bandelier or in Uhle's collections.

The catalogued vessels from Squier's excavations can also be dated to the LIP. One (no. 1/878) is a variant of a form illustrated by Strong for Middle Ancón II (1925, plate 45, m, n). Another (no. 1/869, illustrated in fig. XXXII b) is white-slipped and resembles earlier form VIII vessels. A third (no. 1/872) is related to the centre vessel in Squier's illustration, except that it has a wider rim, and the fourth (no. 1/879) is a small, white-slipped jug with a broken rim. This has a single, vertical strap handle opposite which, on the upper shoulder, is a small panel of black lattice. Black on a white slip is a trait found in the LIP and LN, being the basis of Bueno's Ichimay style, although this also includes black and white on red pieces (Bueno 1979).

No vessel resembling any of these is found in LH assemblages excavated by Uhle or Strong and Corbett, so that Squier's excavations must have been in LIP graves. Their importance lies in the fact that they show several vessels from the Bandelier collections associated in a single grave.

NOTES.

1. We cannot be positive that all the vessels illustrated come from one grave, nor even that they come from the particular interment that he describes, although the implication is that they do. Their similarity to vessels from the Bandelier collections, in my opinion, supports their being a contemporaneous set.

II. A.F. Bandelier

Description

Bandelier arrived in Lima in 1892 and during the next year worked on the coast in various valleys and also in the highlands (Hodge 1897). He was privately supported at first, but from 1894 onwards his work was carried out under the patronage of the American Museum of Natural History in New York, where his collections are now deposited. The sample studied comprised 236 vessels, all but 5 from Pachacamac. These other 5 were obtained by him, via excavation or purchase, from Surco. (probably the site of Armatambo) and Ancón. The remaining 231 vessels include four catalogued as being from Squier's excavation at Pachacamac. These have already been discussed. Each of the Bandelier vessels bears a number in black ink preceded by the letter "B". This number, together with a brief description of the object, is entered in the large catalogue of all his material deposited at the museum. The number has become obliterated on twenty-four vessels. The only

accompanying note in the catalogue states that the vessels come from the ruins of Pachacamac and were unearthed by A.F. Bandelier in the autumn of 1892. They were found associated with mummies in graves and not in the buildings. They were found in the second or lower tier of graves which were chambers or cells covered with a roof of timber and/or canes, at an average depth of 12 ft. from the surface. About these chambers were other graves, or rather an accumulation of mummies. These mummies fell to pieces on being unearthed and only a few fragments could be saved. This is the only information the museum possesses¹.

Fortunately additional information has been provided by Uhle (1903, p.8) who stated that:

"Bandelier explored the eastern section of the vast cemetery which surrounds the Temple of Pachacamac."

This statement pinpoints the general area of Bandelier's explorations and these have been marked on S.P. 20. In support of the view that he excavated in the same area as Uhle is the fact that there is a reference to two tiers of graves, and that his description coincides with that given by Uhle for graves in the open cemetery in front of the Temple of Pachacamac: "... cane thatched, 2 to 7 feet below the surface, sometimes in adobe-lined compartments..." (op. cit., p.22). The vessels are catalogued in groups, apparently according to their shape, and no grave associations are given. Squier's excavation, however, shows a possible vessel grouping. All vessels were deemed to be plainware, but, in fact, 19 of the 227 jars excavated by Bandelier are decorated and can be dated to the late MH and LIP. Because of this it is possible to place the plainware in these periods.

Analysis

There are six Black Ware vessels, two of which are illustrated in fig. LXXXIX a and b. The remainder are all Orange Ware and have a matte surface, with the exception of some early bottles, flasks and fancy vessels, which have a slight lustre. A few of the matte vessels exhibit specks of a green glaze-like substance that denotes firing in too hot an atmosphere (see Menzel 1966, p.81, for remarks on a similar phenomenon on LIP pottery from Chíncha). This incipient vitrification has been noted on the plainware rather than the decorated.

An examination of the plainware shows that 35 of the 227 vessels are Orange Ware form VB-ii, all with a flaring rim, globular or ovoid body and loop handles usually placed at the point of maximum diameter (fig. XXVII b - d). Another 21 are form VIIB which is also found in Black Ware (fig. LXXXIX b). There are three other prominent forms that have not yet been found in the study area. One of these forms is represented by 33 examples and is illustrated in Squier's article as the centre vessel at the back (1974, p.43). Another form with 31 examples is a wide-mouthed jar with a rim, 9 to 18 cms in diameter, and an overall height from 11 to 23 cms. The rim is swollen and possesses a carination at mid point. The vessels are related to some illustrated by Strong for Middle Ancón II (1925, plate 45, m, n), which should give them a late MH date. Like the Ancón vessels they possess two tiny triangular lugs at the carination. There are also a few in Uhle's Pachacamac collections (Catalogue nos. 27493 (837) and 27491 (838)). They are said to be from the oldest part of gravefield I. The third form is that of a small one-handled jug with a straight collar and a rim diameter of from 5 to 7 cms. There is a single strap handle from the mid point of the rim to the upper shoulder and some of

them have a corner point on the body to mark the end of a sloping shoulder. There are 24 of these vessels and their counterpart can be seen in a decorated MH vessel from Supe (Kroeber 1925, plate 70, fig. d). Forms VC and VI comprise a small portion of the collections and number five and eleven vessels respectively. Other plainware shapes are the bottle with an inward sloping spout and a tubular handle. A similar jar is illustrated by Strong from Ancón and dated by Menzel as MH 2B (Strong 1925, plate 46, fig.e; Menzel 1964, p.93, note 325). There are also eight well-finished bottles without handles, that are similar in form to Teatino bottles but without the decoration (Bonavía 1961, p.82, lámina IIA). These are fired to a ruddier colour than the other vessels in the collection and have a well-smoothed surface with a slight lustre. There are also two flasks (fig. XLIX e) with a similar finish. Another flask (fig. XLIX f) has strap handles.

With regard to the decorated vessels, there are nine face-neck jars that fall into two groups. The first group comprises jars with an almost lenticular body shape and a flat base, with a modelled and painted face on the neck, usually with protruding ears. The upper shoulder is used as the design area for a large, very stylised double-feline head (fig. XXXIX a). These are similar to one illustrated by Uhle (1903, plate 7, fig. 1) and found in his "v" graves under the Temple of Pachacamac. I believe that they date to the late MH from their shape and the stylised double-feline head, which is comparable with late MH examples from Ica (Lyon 1966, plate VI, figs. 26-43). The second group consists of three unpainted vessels of similar shape to the previous ones, but with vertical loop handles placed at the point of maximum diameter. (The previous group has no handles.) Two of the necks are flaring and the other is swollen and capped by a flare, a

typical Chancay-shape rim (cf. Kroeber 1926, plate 82a). The ears, nose, eyes and mouth are executed by means of appliqué blobs with further adornment of gashes or punctations (fig. XXXIX b). On the back of the rim behind the face is a horizontal panel filled with a zigzag line and punctations in each of the triangles formed. Perhaps this is meant to represent hair. Two of the vessels have diagonal rows of punctations from the eyes across the cheeks, a later version of tear lines that go back to at least the early MH (Menzel 1964, p.56). The jar bodies are undecorated, except for one jar that has two appliqué birds or bird-men placed opposite one another on the upper shoulder. There are also two form VIIB vessels that have rows of punctations on the rim and/or body. Uhle has illustrated a face-neck vessel similar in decorative technique (1903, plate 8, fig. 9), but the neck is more of a bottle spout and had a single strap handle behind the face. In his collections at Philadelphia there are, in fact, several vessels that resemble the Bandelier ones and they are all from gravefield I (catalogue nos. 27298 (1892); 27299 (1893); 27300 (1894)).

Of the other decorated vessels that are not face-neck jars, three are one-handled jars similar in shape to one illustrated by Strong for Middle Ancón II (1925, plate 44, fig. f). One of them (B 573) has black and white semi-circles pendant from the rim, like jars illustrated by Strong for Late Ancón I (op. cit., plate 43, figs. j, k. Also Willey 1943, plate 1, fig. g). The design on another jar body (B 78) is in red, orange, black and white and shows a horizontal row of birds. Two others (B 79 and 85) show black dots and zigzag lines on narrow white vertical bands, similar to those found on vessels illustrated by Uhle for gravefield I (op. cit., plate 7, figs. 4, 5). Of the remaining

jars with painted decoration, one (B 230) has a VIIB shape and a stepped cross design on its upper shoulder. This design can be seen in vessels illustrated for Late Ancón I (Strong, op. cit., plate 43, figs. i, j, l). The other (B 220) has the shape of the face-neck jar illustrated in fig. XXXVIII k, and has a typical Red, Black and White Geometric design (cf. Strong, op. cit., plate 43, fig. k; Willey, op. cit., plate 1 h). Uhle does not illustrate a vessel with this design, but it does occur in his collections, one example being painted on the body of a jar similar in shape to one he illustrates in plate 7, fig. 5.

In conclusion, both the shapes and the decoration of Bandelier's vessels can be related to those found by Uhle in the same grave-field, that are designated as belonging to the period prior to the Inca conquest. They can also be related to vessels from the Ancón cemetery which date back to MH 2B. There are no LH styles in these collections. On the other hand they may not span all the LIP for various reasons. Firstly, there is the lack of a matte, white slip or crude white decoration on the plainware such as, for example, white rim bands, white neck bands, white bands around the handles, or an overall white slip. Secondly, there is very little of the black and white decoration on an unslipped or red-slipped background, such as Bueno finds is characteristic of his Ichimay style (Bueno 1979, ms). The Red, Black and White Geometric style is a design in three or four colours on the unslipped surface of the vessel, and all the painted vessels in the collection use three or four slip colours as well as the surface colour. One might also have expected some more elaborately modelled pieces, such as those illustrated by Uhle (op. cit., plate 8). Finally, there is Uhle's comment about the age of burials in this cemetery. He has written the provenience of each

vessel on the slips of paper that accompany them and bear their catalogue number. Some vessels are referred to as coming from the "younger, western part of gravefield I" and others as coming from the "older part of the gravefield", suggesting that the eastern part, where Bandelier excavated, is the older part. This hypothesis is reinforced by the fact that Uhle's collections from the same cemetery do not duplicate Bandelier's. There are shapes and decoration common to both and those that are unique. With regard to the analysis of ceramics from the study area, the collections demonstrate that forms VBii, VC, VI, VIIB all belong to the early LIP. Forms not found in the Bandelier collections, such as IX, XI and XII probably span the late LIP and part of the LH. Unfortunately it is impossible to be precise owing to the lack of specific grave associations.

NOTES

1. Mrs. B. Conklin told me that they tried to obtain more information on provenience etc. from his widow years ago, but without success.

III. M. Uhle

Description

Uhle began his archaeological investigation of Pachacamac in 1896. As well as mapping the site and making detailed plans of important structures, he took notes on the construction and lay-out of various buildings and carried out extensive excavations, some in the courtyards of what he called "palaces", but mainly in cemeteries. In the former he states that he found intact vessels similar to those found in cemetery VI, that is Inca or Inca-associated (1903, p.61). But it is his excavations in the latter which have yielded the bulk of his ceramic collection now stored in the Museum of the University of Pennsylvania in Philadelphia. These cemeteries are marked in Roman numerals on his map with the exception of nos. VI and V. It is possible that he intended no. V to be the Cemetery of the Sacrificed Women on the lowest southeast terrace of the Temple of the Sun. Certainly the graves there are marked on the map with his customary series of "x's", but no number is given to this group. On the other hand he has marked groups of graves in other parts of the ruins without a Roman numeral, so that any of these could be cemetery V. I could see no vessels in his collections assigned to this cemetery and possibly recourse to his notes will clear up the matter. As stated previously, cemetery VI is not marked on his map, although general directions are given in the text as to its location outside the main ruins (1903, p.62). He states that he did most work in cemeteries nos. I and VI and very little in nos. II and III, because the graves were very scattered and preservation was poor (ibidem, chap. 6. p.12). This is reflected in the amount of ceramic material from these cemeteries, which numbers three or four vessels.

Analysis

a) Gravefield I

Uhle's excavations in this cemetery in front of the Temple of Pachacamac are well-known and have been summarised by a number of authors (Strong and Corbett 1943, pp.43-45; Menzel 1964, p.53; Bankes 1977, pp.25-27). It was here that he found graves containing different styles of pottery in a stratigraphic sequence. These styles were assigned by him to periods now known as the Middle Horizon, Late Intermediate Period and Late Horizon. My examination of his collections showed that he had illustrated a fair range of decorated vessels, but that there were some, both plain and decorated, that he had not illustrated. Many of these can be related to ones already discussed in the Bandelier collections. They include face-neck jars with incised and punctate designs, such as depicted in fig. XXXVIII k, form VIIB jars and an Orange Ware one-handled jar, similar to the Black Ware one illustrated in fig. LXXXIX a. There are flaring-necked jars with long pointed bases, similar to those described by Kroeber for late Cañete (1937, plate LXXXIII, figs. 8 and 9), but without the appendages on the upper shoulder (catalogue nos. 27404 (1918); 27405 (1261a)). These usually have a single handle and some have a small nubbin, like a nose, half-way up the rim (catalogue no. 27396 (1133)). They may represent a stylised face-neck jar. There are form VIIB and one-handled jars (catalogue nos. 26978 (1563); 26979 (1567); 26976 (2644)) with an Epigonal design in at least three colours, as one finds in the Bandelier collections (see discussion for jars B 78, B 85, B 230, B 573). There are also wide-mouthed jars with a slightly swollen rim which has a carination at midpoint and two tiny lugs (catalogue nos. 27491 (838); 27493 (837)), as in the Bandelier collections. What is also important and not in the latter

is an Orange Ware form VIIA jar (catalogue no. 27414 (1128d)), which is said to come from the younger, western part of gravefield I. This is similar in every way to the jars previously described under form VIIA, except that it is unslipped and daubed with white paint. Unlike most of the LH specimens associated with the Inca occupation to the northwest of the site, this vessel has no snakes, bumps, or a white band design. Finally, from the oldest part of the gravefield come two jars with flaring rims and horizontally placed handles (catalogue nos. 2740 (1024 f); 27461 (976)). One of the rims is similar to VD rims described previously (fig. L). There is also a face-neck jar like form VIIIB, with a crudely incised face and four rows of very small cane circles stamped around the upper shoulder (catalogue no. 27250 (831)). The circles are like those of fig. LI i, but more evenly spaced.

There are similarities between the plain and decorated ware of each collection, as might be expected from the location of excavations in the same gravefield. It is interesting that the Uhle collections have no Orange Ware form VB, VC or VI, nor the small one-handled jar. It is possible that these are earlier in time than the bulk of Uhle's collections from this gravefield, but forms VB and C are well represented in the study area and should have a long time span. Their absence is, at present, inexplicable.

b) Gravefield II

This is in the area marked B by Uhle in the southeast quarter of the ruins. It is northeast of the Temple of Pachacamac. He suggests that area B is the oldest part of the city (op. cit., p.56), although he contradicts this by a previous statement that the area between hills X, Y, Z is the oldest part (op. cit., p.11).

He gives no further description of the cemetery and, in my examination of his collections, I could find only three vessels designated as coming from Gravefield II. One is a one-handled jug (catalogue no. 27401 (1339)) similar to those found in the Bandelier collections. Another is a slightly enclosed bowl (catalogue no. 27249 (1341)) with a double row of small cane circles stamped around the upper shoulder. The third is a tiered vessel of Black Ware with vertical handles at the waist (catalogue no. 27345A (1340)). It is possibly related to an LIP form from Chincha, studied by Menzel (1966, plate XII, fig. 28). She states that the form goes back to the early MH (ibidem, p.88). These three vessels are unlike anything associated with Inca refuse or from other cemeteries excavated by Uhle. They may date back to the MH, which would be expected if this is the oldest part of the site.

c) Gravefield III

This is marked on Uhle's map as being west of sector A, which is the large forecourt in front of the Temple of Pachacamac. My notes on the vessels from this area say that there is Epigonal and press-moulded ware, which suggests an LIP date.

d) Gravefield IV

This is marked on the map as being to the northeast of Gravefield II. I could find no vessels from this gravefield in Uhle's collections.

e) Gravefield V

This is not marked on the map, nor were there any vessels from it in Uhle's collections.

f) Gravefield VI

Again this cemetery is not marked on his map, probably because of lack of space. Its approximate location has been marked on mine (S. P. 20). In this area between the inner and outer city walls he states that there were the outlines of buildings that were probably huts with adobe foundations and a cane upper part (op. cit., p.62). The cemetery appears to have been somewhere amongst the house foundations some 150 yards from the inner city wall. Vessels were found in both the houses and the cemetery, and were associated with the Inca occupation. This would make sense given that the Mamacuna is just outside the city wall to the northwest, for one would expect a supporting population to live nearby. The same vessels were found both in houses and in the cemetery, except that in the former there were large storage vessels (form XVI, fig. XLVIII).

Uhle has illustrated a fair range of decorated ware in plate 13, and associated Black Ware, face-neck jars and cooking vessels in his figures 66 to 87. These establish the LH nature of the area. Forms that he did not illustrate are Cuzco-style two-handled dishes and small one-handled jugs (catalogue nos. 31731 (2866), 31733 (3135)); a Black Ware bowl with incised lugs and a modelled cormorant on the rim (catalogue no. 31839 (2818)); Orange Ware form I with a snake and bosses in relief (catalogue no. 31956 (3314)); form VA with varying decoration within the norms previously described (catalogue no. 31967 (2733 e)); form VIIA with vertical handles and varied decoration (catalogue no. 31965 (2864a)); form VIII with a snake in relief and bosses (catalogue no. 31959 (1306)); form IX with a snake in relief and white on red decoration (catalogue no. 31923 (2853)); various small flasks which are not common in the valley and are decorated

with white bands on a red slip, as in his fig. 86 (catalogue no. 31916 (3134a)). He illustrates a wide variety of Orange Ware form X face-neck jars and some in Black Ware (op. cit., plate 13 figs. 2-7). The association of all these forms with the Cuzco style confirms their LH dating.

Forms not found, that one might reasonably expect, are Orange Ware II and IV, since both are found in Strong and Corbett's and/or Patterson's excavation, and Orange Ware XI and XII, which I have not yet seen at Pachacamac. Moreover, there are no Orange Ware bowls like XIIIIC, or Black Ware bowls or two-handled dishes, which might also have been expected. It is possible that forms II, XI and XII may no longer have been manufactured by the time the Incas established themselves at Pachacamac. Another puzzling absence, in view of its presence in Strong and Corbett's excavation, is that of Brown Ware form I. In fact there is no Brown Ware at all in Uhle's collections. I have seen form I rims on the surface of the site over to the northeast near the pueblo joven of Puente and it is also found in Patterson's excavation, which is in the same area. At present no explanation can be given for its absence from the Uhle collections.

g) The Temple of the Sun Excavations

This cemetery is on the first terrace of the south-east front of the Temple of the Sun. Here Uhle found 46 skulls, all of women who appeared to have been strangled. The west part of the cemetery had been disturbed in the past and more than twice that number of burials may have been made (Uhle, op. cit., p.84). He gives a succinct description of the pottery

finds (ibidem. pp.87-88), which were practically all in the Cuzco style, and included aryballi, dishes, plates, ollas and small jugs. These will not be discussed further here, although a detailed study of this pottery has yet to be made. What is important is the fact that in these graves he found Orange Ware VA and VIIA vessels, both with the snake in relief and the latter with bosses as well. He did not illustrate these or the few Black Ware ollas (catalogue no. 31130 (2357)) with a band of incised decoration around the upper shoulder. As with cemetery VI, there is no Brown Ware I, Black Ware bowls or two-handled dishes, yet the latter occur in Strong and Corbett's excavation.

Interpretation

In conclusion, Uhle's excavations allow us to contrast the kind of plainware associated with known LIP styles and that associated with known LH styles. The majority of vessels from his Gravefield I excavations come from the open cemetery in front of the Temple of Pachacamac and are accordingly dated as LIP¹. The vessels are clearly related to those of the Bandelier excavations nearby, the points of coincidence being the Red, Black and White Geometric style, the incised and punctate decoration, Orange Ware form VIIB, the jar with a flaring rim and a single strap handle, and the jar with the rim carination. Uhle's collections from the open cemetery do not exhibit the variety of plainware found in Bandelier's, nor do they go so far back in time to the MH. On the other hand, they probably extend further forward to the end of the LIP. This is hypothesised because of the number of anthropomorphic and zoomorphic vessels and the occurrence of modelled and moulded Black Ware.

The Temple of the Sun excavations and those in the north-

west part of the town associate certain plain and less decorated vessels with those in the Cuzco style. Forms that are LH are Orange Ware I, VA, VIIA, VIII, IX, X, and XVI, as well as the Black Ware ollas. Many of these forms are decorated with a modelled snake and/or white bands on a red-slipped background, as well as with modelled animal figures, bosses, and certain incised designs, all of which differ from those of Gravefield I. None of the forms is found in an earlier context. Such associations help date the study area sherd collections.

NOTES

1. I am not referring here to vessels from beneath the Temple of Pachacamac, or just in front of it, which do date from the MH to the LH. See Uhle's drawing, op. cit., p.19 fig. 3.

IV. W.D. Strong, J. Corbett and G.R. Willey¹

Description

Excavations at Pachacamac took place between the 22nd July and the 10th October 1941. At Tello's request they were made in a refuse heap roughly east of the Temple of the Sun in order to learn something of the stratigraphic sequence of ceramic material and, in particular, to find out the position of the Interlocking style since Giesecke's restoration work at the Temple had uncovered many such sherds.² The location of their large trench or cut has been adequately described in their 1943 report and has been transferred to S.P. 20. Before this cut was excavated, they dug five small test pits, 2 by 2m square around the proposed limits of their cut (Strong

and Corbett 1943, p.41 fig. 4). These were dug in artificial levels of 50 cms, sterile soil being reached between 2.25 and 2.70 m from the surface. In pits 2-5 Inca and Inca-associated sherds were found in the upper levels and Interlocking sherds in the lower levels, but no important burials or structures were noted.

Pit 1, however, was different and revealed an EIP cemetery. It was eventually extended northwards to meet cut 2 and was dug down to about 3 m from the surface, but never completely excavated into sterile soil. Newman notes that 127 burials were found. The lower layer of burials from 2 m downwards was made in grass-lined pits from 0.50 to 1 m deep and there was never more than one burial to a pit. The interesting fact about these burials is that they are fully flexed and in a sitting position, facing southwest.³ In the upper layers the burials appeared secondary, for skulls were found in isolation from the postcranial skeletons, which were disarticulated. Grave goods, such as the Lima-style vessels, were scattered haphazardly around. The conclusion one might draw from this brief description is that the upper layers of burials have been disturbed. The pit has been described because it supports my interpretation of the bulk of the nearby refuse. This point will be dealt with later.

A further test pit, no. 6, which was not mentioned in the published report, was dug by Willey to the east of the Temple of Pachacamac and north of what he called the Temple of the Moon⁴. Its approximate location has been indicated on S.P. 20. This pit was dug in artificial levels, from 60 to 80 cms, and yielded many plainware sherds and some in the Cuzco style. At 1.65 m below the surface Willey found a burial wrapped in

rotting fabric, at which point the pit was abandoned. It is a pity that a more precise location was not given, although Willey felt that the rubbish in the pit was associated with the compound to the east. Certainly the Cuzco sherds suggest that activities took place there during the LH.

The largest excavations were those put in the refuse heap. Cut 1 was 27 m long from east to west, 7 m wide at its west end and 1.60 m at its east end. Cut 2 was a 1 m extension to the south of cut 1. The profiles in their report (op. cit., figs. 5 and 6) show that the east, north and south sides of the cut sloped markedly inwards. Cut 1 was dug in artificial levels, the first three being 1 m deep and the remaining 0.50 m deep. Cut 2 was dug in blocks 1 m square and 0.50 m deep. Both cuts were dug through what appeared to be a 2 to 3 m thick haystack containing Inca refuse. This was termed the chala layer. Beneath this were layers of dirt, gravel and detritus which they thought came from construction work at the Temple of the Sun. Under this was a retaining platform a metre or so in height and built of hand-made adobes. To the west of this was architectural fill. Beneath the structure were habitation levels of puddled clay and possible fire pits. These lay over ash lenses and the sterile bed of coarse brown sands that sloped gently from west to east. Patterson has given a reasonable interpretation of these lower layers, which all contain pottery in the Lima style (1966, pp. 113-114). They will not concern us here.

All sherds from the cut 2 blocks down to level L were saved. (See their fig. 5 and overlay). Beneath level L the decorated ware was saved, but only rims, bases, handles and other diagnostic sherds were kept from the plainware (Junius

Bird, personal communication, 1979). The Inca material from cut I was classified and discarded in the field, only unusual pieces being retained. Most of the decorated EIP sherds from this cut were also kept. Representative sherds of these collections were left with Tello at the Museum of Anthropology in Magdalena and the rest shipped to New York, where further "type" collections were sent to various university museums such as Harvard and Berkeley. What is now available for study at the American Museum of Natural History is a sample of the decorated ware from cut 2, a few decorated pieces from cut 1 and some of the plainware from cut 2⁵. The sherds used to illustrate types in the published report are part of these collections. I have studied the chala blocks down to about level Q in their fig. 20 (Strong and Corbett, op. cit., p.81). Below this level there are no more LH sherds, except for a few from blocks close to the surface.

Ceramic Analysis

There are only two time periods represented in cuts 1 and 2: the EIP and the LH. This has been the opinion of the excavators and others (Strong and Corbett, op. cit., pp.79-82; Patterson, 1966, p.114) and there is nothing in the sherd collections that would lead one to suppose otherwise⁶. The decorated styles for the LH are the Cuzco style, the Pachacamac Inca Black Ware and the Ichimay or Black and White on Red style. All these are illustrated in the report (op. cit., figs. 7-12). The plainware associated with these resembles that found in the study area. There are 75 Brown Ware form I rims, many of which are charred. Its presence here is surprising in view of its absence from Uhle's collections. There is a single Brown Ware

form II rim and numerous handles, bases and body sherds. Orange Ware predominates with several examples of form I, IV, VA, and a few VB-1, VIIA, VIII, IX, X, XI, a few bowls and some form XVI. There are single examples for form II, VD and VIIC. Decorated body sherds for these jars show the usual snake in relief, and white bands or panels on a red-slipped background. Black Ware includes dishes and bowls, without the incised designs seen in the study area. The only designs found here are the snake on bowl exteriors and birds and circles on the rim interior of dishes. There is also a plate with an incised rim (figs. XC g, h; XCII a; XCIV i). These associations with the Cuzco style strengthen the LH date for these forms in the study area and, in particular, for Brown Ware form I, which is so numerous in the ceramic collections.

Interpretation

An important result of the ceramic analysis is that it shows that the layers contained a greater mixture of sherds from the two time periods than is apparent from Strong and Corbett's fig. 20, which displays graphically the percentages of types from each block⁷. This mixture is partly due to their awkward method of excavation in artificial levels and blocks. This meant that sherds from different strata were mixed in a single block. Such a mixture could be predicted for blocks at the bottom of the chala layer, e.g. 64 and 73, which contain portions of both the chala and the gravel and dirt layers. However, Strong and Corbett were unable to distinguish between EIP and LH plainware. If they had done so, they would have realised that the EIP jars with thick rims

and Orange Ware bowls (fig. XCVII b, c, p, g) occur far higher up in the excavation than their charts and figures show, as high as blocks 16 and 18. They mention the sporadic EIP decorated sherd for some blocks in the chala layer, but my chart II shows a minimum of 766 EIP sherds in this layer. This is a larger number than could have worked its way up into the later levels by chance. It is therefore likely that they were deposited with the chala layer.

This leads to the main point to be made about the nature of the mound into which the cuts were dug. From the authors' comments (Strong and Corbett, op. cit., pp.47-48) it is obvious that they assume the upper layers form a concentrated rubbish dump left by aristocratic dwellers around the Temple of the Sun, in other words a pile deliberately created by these occupants. There is an alternative interpretation. If one examines their description in the field notes and the published report, the refuse consists of a thick haystack of reed, cornstalks and fibre ropes, plus a great deal of other vegetal material whose specific components are not given. There were fragments of red-painted plaster and lumps of adobe with cane or rope imprints, camelid bones, desiccated birds, molluscs and a quantity of other artefacts such as reed workbaskets, complete and broken spindles with the thread still wound about them, spindle whorls, needles, combs, some complete and some broken. There were also scrapers, hammerstones, worked sherds, figurines with holes drilled in them for suspension, bone awls and tubes, balls of string, coca bags, belts, sandals, other textiles, some torn, some complete and some mended, a great deal of netting and, finally, a complete quipu (see Table 39). All these objects resemble the ones found in graves, either accompanying the

mummy or wrapped up in the textiles that enclose it⁸. They should be compared with grave goods illustrated by Squier (1967 pp.210-216) from the family buried at Pachacamac, which parallel Temple of the Sun finds down to the desiccated bird. Stothert and Ravines' careful analysis of an LH mummy from Ancon (1976, pp.153-205) shows just how much food and objects were found between the mummy wrappings. Canes from the roofs of burials were intertwined with ropes and covered with mud. This would account for lumps of mud with cane imprints (cf. the cane-roofed tomb from Paracas in Bankes, 1977, facing p.90). Canes were also used in the bundle as a frame to keep the mummy rigid (Ravines and Stothert, op. cit., p.163, fig. 12), and the mummy itself was tied with a variety of ropes and netting (ibidem, p.160, figs. 1, 2). This would account for the quantity of canes and nets in the refuse. I have noted red and other colours on the walls of tombs in the study area, so that the red plaster in the refuse need not necessarily come from the walls of the Temple of the Sun, but from the structures added on to the lowest terrace to the east (marked no.54 on Uhle's map).

A further point in favour of this refuse's being no more than a heap of looters' backdirt is that burials were found in cuts 1 and 2. If one examines the authors' field notes, it is obvious that these are not primary burials, but bodies that have been dumped. In cut 1 there were seven, two of which were textile-wrapped mummies found at the eastern end of the cut. One of these had its molars and the upper portion of the face smashed in. The other skeletons were not complete, but distributed haphazardly in the lower layers. Limbs were missing and some of the bones were bleached, as if they had lain on the surface for a while. In this context the authors' comment on

the burials becomes ironical: "... they seem to have had little disturbing effect on ceramic or other stratification." (Strong and Corbett 1943, p.44).

Furthermore, I think it is unlikely, from what can be deduced about highland and coastal culture during the LH, that people tore down buildings and left the rubble to one side, or threw away whole, usable objects. Firstly, work on architecture in the study area has shown that, rather than tear down old buildings and erect new ones, they added to previously existing ones. If a new layer of plaster was needed, they replastered the old surface. One does not find debris from previous plastering jobs. Support for these ideas can be found in Uhle's analysis of the construction of the Temple of Pachacamac (1903, chaps. 7 - 10). Secondly, it would seem that people tended to repatch their clothing and wear it until they died, rather than throw it away when it became torn (Vreeland 1977, p.176. See also fig. CVIc). Thirdly, Pedro Pizarro (1965, p.187) recounts seeing a room full of Atahualpa's worn clothing, bones from the animals he had eaten, and other objects he no longer wanted. All this was apparently burnt yearly. Although Atahualpa is likely to have been an extreme case, the deduction is that people did not throw away used objects lightly. In any case used personal objects in the hands of a local shaman could be used against one (Lira, 1969)⁹. Fourthly, small figurines of animals, called engaychu by the modern Quechua, are used in animal fertility ceremonies and carefully kept for years (Merelle and Roy, 1971, pp.163-167). It is inconceivable that in ancient coastal Peru people would have thrown away the small figurines of humans and animals that one finds in the Pachacamac refuse,

and which must have represented household gods and livestock. With regard to the quipu, in the study area these are found in niches in tombs, implying that quipucamayoc were buried with the tools of their office. Again, it is improbable that they would have been thrown away. Finally, it has been noted that there was plenty of food in the refuse. Today food is prominent in curing and magical rites in the highlands (see Allpanchis, vol.3, 1971). In these rites it is consumed by the participants, and if anything is left over it is burnt. Usually most of the food is burnt as part of the ceremony, or else the parcel of food and other objects is taken far away from the home to a solitary quebrada and left there. There is no throwing away of food used in these rites (Dalle 1971, pp.38-42; Marzal, 1971; Cuba de Nordt 1971, p.176).

Bearing all these points in mind, the most likely interpretation of this and other similar LH coastal refuse is that it is the result of extensive grave-looting by the Spaniards in their quest for gold. In this connection it is interesting to recall Cieza's comment about Pachacamac: that he knew two captains who had dug there and found a great deal of gold and silver, and that there was thought to be a great deal more, but no one knew for sure where it was (1947, p.422). Such a statement shows that looting went on there for many years after the conquest, giving rise to the huge heaps of apparent refuse, as the Spaniards desecrated tombs, tore up mummies and scattered the remains of the bundles aside. This, I feel, accounts for the so-called refuse.

NOTES

1. My description and comments are taken not only from the published report of 1943, but also from Corbett, Willey and Newman's extensive field notes which the American Museum of Natural History made available to me.
2. The usual name for the style is Lima (Patterson 1966, p.35-36), although Jiménez and Bueno (1970) still call it Maranga.
3. EIP coastal burials are usually extended and flexed burials attributed to highland innovations in the MH. See Jijón y Caamaño's description of cemetery II of Huaca III where there were 32 extended burials all associated with Lima-style pottery; Kroeber's excavations in the same pyramid; also Donnan and Mackey's description of Moche I-V burials. Jijón y Caamaño 1949, p.27; Kroeber 1954, p.11; Donnan and Mackey 1978, pp.25-211.
4. This is the mound to the south-east of the one on which the Temple of Pachacamac was built. It was probably an EIP structure (Patterson 1966, p.115).
5. There is also a short unpublished report by Corbett on the plainware from cut 1 on file there.
6. Strong and Corbett (op. cit., p.86, 89) mentioned two middle Ica trade sherds at the bottom of the chala layers, but these were not in the study collections. They equated them with MH influence.
7. This, in any case, is a pointless exercise, since the plainware of the two periods is lumped together in one category, and the number of Inca sherds is heavily weighted by the fact that the same vessel can be listed under three or more types. For example, a broken polychrome A aryballus with a red neck would occur under plain red painting, the fern pattern, hatched zone and aryballoid nubs.
8. An idea of their nature can be obtained from figs. XCIX to CVI of this thesis, where the objects drawn come from similar refuse in the study area.
9. Lira's paper describes a pago or offering made by a peasant to get rid of an evil spell cast against him. The witch-doctor found that this spell came from a doll buried in the house without the peasant's knowledge. This doll was wrapped in some of the peasant's worn clothing.

TABLE 39

LIST OF FINDS FROM STRONG, WILLEY AND CORBETT'S EXCAVATION
AT PACHACAMAC, SUMMARISED FROM WILLEY AND CORBETT'S FIELD NOTES

<u>1. Wood</u>		<u>3. (cont.)</u>	
Spindle	67	Belt	6
Weaving Stick	4	Coca bag	2
Chopping Block	1	Sling	3
Platter	1	Poncho	2
Pegs	4	Textile with yellow powder	1
<u>2. Cactus, Cane, and Reed</u>		Rope	3
Matting fragments	11	Tape/Cord	1
Split cane	4	<u>4. Ceramic</u>	
Comb	6	Spindle whorl	8
String	1	Figurine	3
Reed box	2	Sherd disc	4
Rope fragments	32	<u>5. Leather</u>	
Olla stand	13	Sandals	2
Needle	4	<u>6. Metal</u>	
Sandals	5	Pin (corroded)	1
Rush bundle	4	<u>7. Bone</u>	
Stick and fibre	1	Bone tool	7
Tubular cane	1	<u>8. Stone</u>	
Basket fibre	1	Hammerstone	1
Grass skirt	1	Knife	1
Broom	1	Polisher	1
<u>3. Cotton and wool</u>		<u>9. Miscellaneous</u>	
String	17	Pyroengraved gourd	1
Trunk Line	17	Hair rope	4
Fish net	7	Red adobe plaster with reed marks	2
Quipu	1	Brujerías	2
Plain textile	14		
Decorated textile	18		
Ball of thread	4		
Sling shot holder	1		

V. T.C. Patterson and students2093 sherdsS.P. 20
Figure CXDescription

In August 1966, with the permission of Arturo Jiménez Borja, a test pit was put in at the north end of Pachacamac by T.C. Patterson and his students. Unfortunately the field notes made available to me do not give the exact location of this excavation, but they indicate that it was made in the Puente de Lurín soccer field to the southeast of certain depósitos. Its approximate location has been marked on S.P. 20. These depósitos are small rectangular compartments that abut the southeast face of the northwest city wall, about 220 metres from its north corner¹. This portion of the site has changed since Uhle made his plan in the last century. His road marked "to Lima" no longer exists. In its place runs the Old Panamerican Highway that was once the path that crossed the northern part of the site and went straight through the outer wall and the courtyard with the sunken chambers. The modern tambos indicated by Uhle have expanded on both sides of the Pan American Highway to encroach upon the site. They form the pueblo joven of Puente de Lurín. Every effort has been made to fence in the ruins, but the modern village now stands on some of the old buildings marked "tambos" by Uhle. The soccer field, although technically fenced off, is used for transit and games by adults and children.

The excavation was 2 by 2.50 m and the pit was excavated to a depth of over 1 m, at which point sterile soil appeared. Unfortunately there are discrepancies in the field notes over the description and the naming of the different layers, so that a reconstruction of the profiles has not been attempted. Nevertheless their notes and sketches are sufficient for me to draw a plan of the pit after it had been excavated down to sterile

soil (fig. CX).

There are 11 layers, which show brown refuse alternating with grey packed mud floors and ash lenses. In the southeast corner there were two intrusive pits and two walls were discovered beneath the surface. A brief description of each layer follows:-

Layer 1 This layer is about 8 cms thick and a light grey colour. It contains modern and pre-conquest refuse.

Layer 2 This is 4 cms thick and a dark brown colour. There is a charcoal lens above a mass of vegetal material which includes sherds.

Layer 3 This is 4 to 5 cms thick and a light tan colour with some shell and vegetal material.

Layer 4 This appears to be a floor of packed mud. It is 1 cm. thick and a light grey colour.

At this point in the excavation a wall appeared, probably associated with the floor, although this is not a conclusion reached by the excavators. It runs from the northwest wall of the square to the southeast wall and is 70 cms wide. Although it was excavated to its base, its height was not given in the notes, but it was probably about 15 cms, judging from the depth of lower layers. It was made of angular stones set in adobe mortar. The kind of stone is not specified, but it is likely to be the slate that abounds in outcrops at the site of Pachacamac and splits easily into a rectangular form. Only one course of stones from the wall remained, and even some of these are missing. At this point in the excavation the stratification to the west of the wall appeared different from that to the east, and the excavation of this part of the square was eventually

abandoned. There were apparently layers of packed mud and sand between 3 and 4 cms thick. To the east of the wall the excavation continued as follows:-

Layer 5 This layer is about 6 cms thick and is dark brown because of the amount of vegetal material. There is other refuse such as sherds, molluscs and charcoal.

Layer 6 This appears to be another floor of greyish packed mud from 1 to 2 cms thick.

Layer 7 This is another layer of refuse, dark brown in colour and from 18 to 20 cms thick. The stone wall rests at the bottom of this layer.

Layer 8 A layer of refuse, also dark brown in colour, that is separated from layer 7 in places by a thin layer of sand. It contains plants, fish and animal bones, molluscs, cordage and sherds.

At this point the pit, which was originally 2 by 2 m, was extended another 50 cms to the east and taken down to layer 8.

Layer 9 This was 8 cms thick at the northwest wall but petered out half way across the square. No reason is given for differentiating it from layer 8 and it appears to contain similar refuse.

On the northeast face of the square there appeared a wall of mould-made adobes, except for a hand-made one in the corner (see fig. CX). The wall ran westwards and then turned sharply at a right angle to meet the northwest face. It appeared to form the corner of a small compartment-like structure, for it was only 23 cms wide. On its west side, and just beneath

layer 9, is a layer of ash and organic material that only extends between the two walls. These do not appear to be structurally connected. The stone wall is 45 cms below the surface and the adobe one 91 cms below the surface. The ash was not given a layer number in the excavation, although material from it was bagged separately. Underneath the ash was layer 10.

Layer 10 This is a hard packed mud floor that runs up to and over the adobe wall, but does not seem to have extended all over the square. To the south of the adobe wall sand appears to have piled up. In the notes this is given the name of layer 11.

Layer 11 This brown sand extends under the wall itself and also constitutes the material of the two intrusive pits in this area, the southeast of the square. These pits appeared in the southeast corner of the excavation in layer 6. One contained the sherds from an Orange Ware form X face-neck jar with mend holes at the back. The jar contained a small number of black seeds, which were not identified in the field. The other pit contained sherds of several vessels, two of which were cooking pots.

Only field identifications have been made of the various plants and molluscs. Therefore the following identifications must be considered tentative.

Plants Peanuts, lúcuma, gourd, beans, squash, maize, pacae,
cotton seeds and cotton wool, tоторa.

Molluscs Mesodesma (a kind of clam), mytilus chorus (a mussel), tegula atra, concholepas, pecten.

Bone Human, dog, camelid and rodent.

The refuse from all layers is similar and even the supposed floors yielded some sherds. There was also some worked stone in the form of hammerstones, flakes and chips, together with textile fragments, charcoal, cane, reeds, burnt adobes and feathers.

Ceramic Analysis

In chart II all layers have been combined to give totals for each rim form from the excavation. All layers have similar sherds, and sherds from the same vessel were found in several layers so that it was almost possible to reconstruct several complete vessels. There are aryballi, plates and small jars in the Cuzco style, and jars, dishes and miniature bowls in Black Ware. Although Cuzco and Black Ware sherds are widespread throughout the excavation, their total number is small. Neither is there much Brown Ware, only three form I rims and sherds from a single Dark Brown Ware form III vessel with a snake in relief. The association of these with the Cuzco style confirms their LH date. Orange Ware predominates with forms IV, VA, VB-i, VIIA, VIII, IX, X, XI, XIII and XIV. It is a similar assemblage to that found in Strong and Corbett's excavation and reinforces the sherd associations and dating of these forms.

Interpretation

Our ignorance of the exact location of this pit hinders analysis. There is certainly no evidence for a pre-LH occupation, although the two walls are not connected in space,

depth from the surface or mode of construction. The stone wall may possibly be related to the depósitos or to the outer city wall. It is a reasonable width for a late wall at Pachacamac (see Bueno 1978b, p.71, plan of Tauri Chumbi). Such walls were built of mould-made adobes on a stone foundation, which could be up to 1 m in height. The second wall is at a lower level and may have no temporal or cultural connection with the previous wall. It is very narrow, which suggests it was used for a compartment, rather than the interior wall of a room, as one finds upvalley in the study area (see Chapter V of this thesis). Lacking profiles, the excavators have not made clear how the inferred floors are connected with the walls and related to one another. The fact that the second wall is of mould-made adobes does not suggest a date earlier than the LIP.

In conclusion, the excavation serves to confirm an LH date for construction and activities in this area of the site². Given the nature of the refuse around the buried walls, the fact that some human bones were found scattered in it, that there is burnt adobe and a great deal of charcoal, and that some of the pots appear to have been smashed and thrown down, I am inclined to think that this represents the same situation as at the Temple of the Sun. In other words, that graves have been looted and their contents thrown out and partially burnt.

NOTES

1. See Uhle's 1903 map for the original plan of Pachacamac and S.P. 20 for the changes in its present appearance.
2. Uhle (1903, p.56) thought that sectors C, B and E on his map were of more recent construction than other parts of the site. This excavation falls in his sector E.

C. The Lurín Valley

I. Panquilma, PV48-35

<u>Test Pit 1</u>	<u>18,208 sherds</u>	<u>S.M. 13</u>
		<u>S.P. 9</u>
		<u>Figures CXI-CXIV</u>
		<u>Charts II & IV</u>

Description

The location of this test pit is shown on map S.P. 9. It was placed in a mound of refuse, a few metres to the west of a large patio group with many rooms on varying floor levels. The mound itself has been slightly eroded to its west by the water course of a recent huayco. This same huayco has also deposited a layer of silt, several centimetres thick, over some of the lower levels of the structure. From the base of the water course to the top of the mound is just under 3 m. Previously a huaquero had dug a cut into the mound and this showed the interior to have a haystack appearance, much like that described by Strong and Corbett for Pachacamac. Refuse appeared plentiful and for this reason the pit was excavated here, since it seemed likely to yield a ceramic sequence that would go back to the LIP. In addition one could follow the stratigraphy because of the cut made by the huaquero.

The pit was 2 by 1.75 m and was laid out with one side of the huaquero cut as its southeast face. The surface was not level since the mound sloped to the west, the highest point being the north stake which is the datum for the excavation. Before excavating a collection was made from the surface of the pit since there were a number of sherds there. This collection included a small paint brush (fig. CIII d).¹ The pit was

excavated in the natural layers traced on the southeast face, these being differentiated by soil colour and the amount of adobe chunks that they contained. As much as possible was saved from this excavation and, because of the rigorous screening, I do not feel that any artefact has been lost. The vegetal material has been partly studied and the results are given in Table 41. The shell, bone, cordage, textiles and artefacts other than sherds have yet to undergo a detailed analysis. A preliminary classification of the small finds, according to their excavation layer, is given in Chart IV. For convenience a summary of this information is given in Table 43. The preliminary identification of fauna is given in Table 40. The 18,208 sherds from the excavation are given a summary classification in Table 44, and a detailed one in Chart II.

Layer 1 This layer extends from the east stake in a fan shape over half of the pit (fig. CXIII). It is not present on the northwest or southwest faces, but only on the northeast and southeast. It is between 6 and 8 cms thick and consists of fill thrown up from the huaquero cut. The soil is a rich umber colour, darker than layer 2, and it contains some granodiorite pebbles, vegetal material, textile fragments, shell, sherds, bone and charcoal.

Layer 2 This layer extends all over the pit and is between 10 and 30 cms thick. The top centimetre or so is a light grey-beige colour, because this was the original surface of the mound. Beneath this the

soil is darker with a few concentrations of ash and charcoal. It contains some granodiorite pebbles and cobbles, some chunks of adobe with cane impressions, vegetal material, bone, sherds and shell. Finds include a bone spatula and cotton thread.

Layer 3 This layer is lighter in colour than the previous one, being a grey-beige because of the large quantity of adobe chunks with cane impressions. It is more compact than layers 1 and 2 and harder to dig. The refuse is less dense and there are a few ash concentrations on the northeast face. There is vegetal material, bone, shell, sherds and feathers. Finds include spindles (fig. CIV b), whorls (fig. C d - h), and a copper needle (fig. CIV c). Near the south stake an adobe brick was found. It measured 45 x 30 x 9 cms. The layer is between 35 and 60 cms thick.

Layer 4 This layer is between 17 and 30 cms thick and is darker than the previous layer. It consists of soft brown soil mixed with what appears to be dung, which gives the layer a dark, yellow ochre appearance. There are as many sherds as in layer 3, plus the usual bone, shell, textile fragments and vegetal material. Special finds include part of a copper tumi (fig. CV a), cactus spine needles (fig. CIII b) and spindle whorls (fig. C d - h). This layer is separated from layer 5 by a concentration of chunks of adobe with cane impressions. Two of these have traces of yellow paint.

Layer 5 This layer is between 15 and 50 cms thick and consists of loose, dark brown soil mixed with a considerable quantity of maize stalks, various kinds of cane and reeds, and ropes made from totora. There are also some dung-like concentrations and a few adobe chunks with cane impressions. Near the southeast face was a mano, 25 cms long, 17 cms wide and 7.50 cms thick. Spreading out from the east stake was a heavy concentration of charcoal, about 13 cms thick (figs. CXII; CXIII). The layer also contained charred sherds and some vegetal material. There were few cobbles in this layer, but there were textiles, bone and shell. Finds include a llama figurine with string around its neck (fig. XCIX a), four wooden weaving tools (figs. CIII f; CIV a), a coca bag (fig. CVI c), and spindle whorls (fig. C d, h).

Layer 6 This layer is harder and more compact than the previous one. It has a grey colour and is from 30 to 60 cms thick. It consists of many chunks of adobe with cane impressions, mixed with a fair quantity of vegetal refuse, although this is far less dense than in layer 5. Against the northeast face and some 30 cms from the east stake a large boulder appears (fig. CXII). It continues to beneath the bottom of the pit and eventually turned out to be over 1.50 m high and 0.80 m at its widest. It is granodiorite. Special finds in this layer include part of another llama figurine; spindle whorls; a female figurine (fig. XCIX b); a stone ornament (fig. CI g); a bone awl (fig. CII a);

a mother of pearl ornament (fig. CV e); a reed mat (fig. CVI g); a spondylus bead ring (fig. CV c); a leather sole (fig. CVI b); and fibre rope (fig. CVI d).

Layer 7 This layer is from 10 to 20 cms thick and of a darker brown soil than layer 6. There is more vegetal refuse here and few adobe chunks or cobbles. There are quite a few sherds and special finds include sandals (fig. CVI a), spindles and a copper spatula (fig. CIV d).

Layer 8 This layer varies between 29 and 43 cms in depth. At the top is a thin overlay of hard beige soil containing some cobbles and adobe chunks. Beneath this is a browner soil with a certain amount of vegetal material, though reeds and grasses rather than maize stalks. There is less bone and charcoal than in previous layers. Half way down in the centre of the southwest face there appeared the outline of a small wall, which was found to join the large boulder at roughly a right angle (fig. CXIV). The material coming from the southeast of this corner (i.e. inside the possible structure) was considered 8_A, whereas the area to the north (i.e. outside the structure) was considered 8B. The wall was made of successive layers of angular cobbles set in adobe mortar. There were probably two rows to a layer, as can be seen from the imprints left in the mortar. This would make the wall 30 cms wide, which is average for structure walls in the Lurín. In fact, it rests on a large boulder which did not become visible until

layer 9. This boulder went down into sterile soil, as did the other. There appeared to be more rubble, adobe chunks and cobbles to the south of the wall than to the north. There were sherds, bone, charcoal and shell in this layer. Special finds included a comb (fig. CIII e); a figurine (fig. XCIX d); needles (fig. CIII b); spindles (fig. CIV b); and a possible loom weight (fig. C 1), all from 8 except the figurine.

Layer 9 This layer is between 18 and 45 cms thick and consists of light, beige coloured soil with a few streaks of vegetal material. There is more gravel than before and the variety of plants is noticeably less. There are still sherds, bone, shell and charcoal, but no longer any textiles. Special finds include a weaving comb from 9, and an unfired figurine (fig. XCIX e) and a stone tool (fig. CI d) from 9B. The layer is divided in the same way as 8.

Layer 10 This layer is from 10 to 33 cms in depth and excavated to a flat bottom. It is really sterile soil with about 200 undiagnostic sherds at the very top. The soil is very compact and hard to dig, a light yellow ochre colour, with a great amount of granodiorite gravels. At this point the bottom of the pit is lower than the floor of the erosion channel to the southwest.

Interpretation

a) The Refuse

Chart IV and Table 43 show the tremendous variety and number of objects found in the refuse, many of which are still in good condition and usable. This suggests that the mound is not a pile of unwanted, worn goods that have been discarded by their owners, but that it is the result of the looting of tombs in the early post-conquest period, as discussed previously in the analysis of Strong and Corbett's excavation. Furthermore, the most abundant plants in this refuse (Cohen 1972/74, table 1, pp.58-60) are precisely the common plants in the wrappings of the mummy from Ancon. These were maize (ear, leaves and stalk) pacae (leaves and fruit), lúcuma, coca, peanuts, beans, gourds and cotton, both as raw balls and as seeds (Ravines and Stothert 1976, Apéndice 2, pp.180-181). Table 40 shows that camelid bones are found in every layer. These may well have come from human graves, since the association of llamas and human skeletons is documented for the LIP on the north coast (Donnan and Mackey 1978, Appendix 2). The caña brava probably came from a tomb roof similar to those described for Pachacamac, that is, canes bound together with tatora rope and covered with packed mud. Such a roof, if torn apart, would give rise to the numerous adobe chunks with cane and rope impressions. The lack of human bone in the midden (although there is human hair) is due either to the Spaniards' burning the mummy and its immediate wrappings in order to prevent idolatry, or to relatives' removing the bones and burying them elsewhere. (See Avila, 1966, pp.241-266 for the burning of mummies by Spanish priests). There are looted graves in the patio group close to the excavation, so that it

is likely that the refuse came from these.

b) The Structure

To the northwest of the excavation, and still within the limits of the mound, is a group of three, small rectangular compartments, all plastered and much like those found within large structures at most sites. It is possible that the wall at the bottom of the excavation could be part of a similar compartment. Nevertheless, it is unusual to find a boulder as big as the one on the plan used for small interior compartments. Large boulders are usually part of the exterior walls of dwellings or tombs on the open pampa. If it were the lower walls of an abandoned dwelling, whose upper walls were made of cane, one might expect to find a living floor and none appeared in this excavation. It should be added, however, that living floors on house platforms, which probably contained cane dwellings, are not very noticeable. In other words, they are not made of packed mud, as are the floors of the patio groups and some room clusters. The structure may, on the other hand, be part of an earlier tomb cluster, such as one finds on the pampa behind the major buildings of sites like Panquilma. These usually make use of standing boulders and have no floors. The sherds are no earlier than the LIP², although it is possible that the structure is earlier and had been abandoned by the time that the graves of the nearby patio group were looted³.

c) The Ceramic material

There were 18,208 sherds from this excavation (Table 44). All wares were present except for the Colonial. The Cuzco style and Black Ware occur in all layers except no. 10.

This would date the refuse as LH and would imply that all the associated plain and decorated ware is LH. It should be noted however, that these associated forms include Brown Ware III, Dark Brown Ware I and II and Orange Ware VC and VI, which have been dated independently of this excavation as being LIP.

Granted that the interpretation of the refuse mound is correct, then there are three possible explanations for this mixture.

1. There is a genuine mixture of material from LIP and LH tombs that were looted at the same time and whose contents were flung out together. The large patio group to the east probably contained tombs of both periods.
2. The forms classified as LIP lasted well into the LH and were being manufactured at the same time as Cuzco-style pottery. Therefore one might reasonably expect to find all these in the same tomb and mixed in grave refuse.
3. The forms were LIP and placed in tombs then, but pottery gifts with food offerings were renewed at regular intervals during the LIP and LH, so that one might still expect to find such a mixture in the same tomb⁴.

With regard to the third hypothesis, it seems to have been the perishable gifts that were renewed rather than pottery or metal. Certainly those who study fancy styles always assume that the pottery found in one grave is contemporaneous (Menzel 1976, p.5; Donnan and Mackey 1978, pp.3-5). With regard to the second hypothesis, I feel that it is unlikely that the above-mentioned LIP forms lasted well into the LH. It is probable that some time elapsed before the Cuzco style was introduced into the valley after the Inca conquest, but the LIP forms in question would surely have been found at sites such as 136 and 104, which

can be dated as LH on grounds other than ceramic. We are left with the first hypothesis, which is the one favoured here. In support of it one must remember the considerable mixture of EIP and LH sherds in Strong and Corbett's excavation at Pachacamac, which is another example of how much mixture can occur between objects of different time periods.

NOTES

1. Where possible the figure reference is made to the actual find. However it was impossible to draw every find for this thesis, so that the reference will sometimes be made to a similar find, usually from the excavation in question. The captions make the provenience clear.
2. There is a possible EIP sherd from layer 9, but one sherd is not sufficient evidence to date a structure.
3. At all large late sites one can usually see small stone circles that often abut the exterior walls of buildings and seemingly go under them. I have interpreted these as abandoned earlier dwellings, although usually there is little diagnostic ceramic material associated with them (see Chapter V on architecture).
4. Menzel (1976, pp.223-228) describes reentry in Ica tombs for the purposes of secondary interment rituals. Cieza de León (1947, chap.LXIII, p.416) also describes reentry into tombs for the purpose of renewing food and clothes.

TABLE 40 (cont.)

		Hum.	Cam.	Dg/Fx	Rod.	Un.B.	Bird	Fish	Cr.	Mu.	Cl.	Un.S.
		B H	B H	B H	B H	B	B F	B				
<u>AVILLAY</u>												
Test Pit	1											x
	2									x	x	x
	3											x
	4					x						
	5	x	x	x		x	x		x	x	x	x
	6	x				x			x			
	7	x	x	x		x	x		x	x		x
	8	x	x			x						x
	9	x										x
	10	x		x		x	x	x	x	x	x	x
	11	x	x	x	x	x	x		x	x		x
Compartment												
	3		x		x	x	x		x	x	x	x
	4		x	x		x	x		x			x
	5	?		x		x			x			x
	6	x			x	x						

TABLE 40 (cont.)

Key:

Hum.	= human	H	= hair
Cam.	= camelid	B	= bone
Dg	= dog	F	= feather
Fx	= fox		
Rod.	= rodent		
Un.B.	= unidentified bone, usually small fragments		
Cr.	= crayfish		
Mu.	= mussel, probably <u>choromytilus chorus</u>		
Cl.	= clam, probably <u>mesodesma donacium</u>		
Un.S.	= unidentified shell, usually small fragments		

Notes:

These identifications have been made by Francisco Flores Vargas and the author.
At Avilley all layers have been combined for each pit.

TABLE 41

IDENTIFICATION OF VEGETAL MATERIAL FROM THE REFUSE OF TEST PIT 1
AT PV48-35, PANQUILMA

<u>Name of Plant</u>	<u>Excavation Layer</u>									
	1	2	3	4	5	6	7	8/8B	9/9B	10
Caña Brava (Gynerium sagittatum)	x	x	x		x	x		x		x
Carrizo (Phragmites communis)	x	x	x		x	x				x
Totora (Typha angustifolia?)					x	x				
Junco (Scirpus sp.?)					x			x		
Maíz (Zea mays)	x	x	x	x	x	x	x	x		x
Achira (Canna sp.)			x		x	x	x	x		
Palta (Persea americana)			x		x	x	x	x		
Maní (Arachis hypogaea)	x	x	x		x	x	x	x		
Tara (Caesalpinia sp.)				x	x		x			
Pallar (Phaseolus lunatus)			x			x	x	x		
Pallar (Canavalia sp.)		x	x	x	x	x	x	x		x
Pacae (Inga feuillei)	x	x	x			x	x	x		
Frijol (Phaseolus vulgaris)	x	x	x	x	x	x	x	x		x
Oca (Oxalis tuberosa)						x?				

TABLE 41 (cont.)
PANQUILMA Test Pit 1

<u>Name of Plant</u>	<u>Excavation Layer</u>									
	1	2	3	4	5	6	7	8/8B	9/9B	10
Coca (<i>Erythroxylon coca</i>)		x	x		x	x	x			
Ciruela del fraile (<i>Bunchosia armeniaca</i>)			x	x	x	x	x	x		
Yuca (<i>Manihot esculenta</i>)						x	x			
Algodón (<i>Gossypium barbadense</i>)			x	x	x	x	x	x		x
Palillo (<i>Campomanesia lineatifolia</i>)						x				
Guayaba (<i>Psidium guajava</i>)			x	x	x	x	x	x		
Sulluku/Boliche (<i>Sapindus saponaria</i>)				x	x		x			
Lúcuma (<i>Lucuma biferá</i>)	x	x	x	x	x	x	x	x		x
Camote (<i>Ipomoea batatas</i>)			x?		x	x	x?			
Ají (<i>Capsicum sp.</i>)		x	x		x	x	x	x		
Papa (<i>Solanum sp.</i>)						x				
Zapallo (<i>Cucurbita sp.</i>)			x		x	x	x	x		
Calabaza (<i>Cucurbita moschata</i>)						x	x	x		
Zapallo (<i>Cucurbita maxima</i>)						x				
Mate (<i>Lagenaria sp.</i>)		x	x	x	x	x	x	x		x
Guanábana (<i>Annona muricata</i>)				x	x					

TABLE 41 (cont.)
PANQUILMA Test Pit 1

<u>Name of Plant</u>	<u>Excavation Layer</u>									
	1	2	3	4	5	6	7	8/8B	9/9B	10
Ceibo (<i>Erythrina</i> sp.)			x			x		x		
Molle (<i>Schinus molle</i>)						x				

Note:

These identifications are an amalgamation of the work of two people: Mark Cohen, a professional archaeologist who studied the vegetal material from some layers in 1970 (1972/74, pp.49-60), and Francisco Flores Vargas, a farmer from the department of Ayacucho, who worked with me on the excavation and the sorting of the material. His identifications coincided well with Cohen's, except for the fact that he did not distinguish between all the species of bean and squash. On the other hand, Cohen did not distinguish between all the grasses, which he classed under gramineae, whereas Flores Vargas was able to give some assistance in this respect. In these identifications I have given the common Peruvian Spanish name, as told to me by Flores Vargas, and beneath the Latin botanical name. It should be noted that in Cohen's analysis there is reference to a layer 5B. This was later combined with layer 6.

II. Avillay, PV48-13721,290 sherds

S.M. 4
S.P. 3A & 3B
Figures CXV-CXXXIII
Charts III & IV

A. Test PitsGeneral Remarks

Excavations were carried out at this site with a twofold aim, as stated in the Introduction. The first was to ascertain whether there were stratified layers of refuse which might document changes between LH and LIP pottery. The second was to discover something of the nature and function of the various buildings that compose the site, because at the time it was believed to be the Inca tambo. In accordance with the first aim, pits 7, 10 and 11 were placed in refuse heaps that seemed to show depth and that were located outside important structures. Pits 1 to 3 were placed in terraces or small platforms to see whether there was any evidence of domestic activities. Pits 4 to 6 were put in courtyards of the large patio group at the front of the site. In addition, several compartments and room features of this group were cleared (R3-R6). Finally, pits 8 and 9 were placed in the structure with the gabled roof in order to discover its function. The areas for excavation were not chosen by any mathematical sampling method, but on the basis of digging convenience, that is, whether the surface of the room or terrace was relatively smooth and level; whether the pit could be related to standing walls without having to clear rubble; whether equipment could be brought easily to the designated area and whether there was sufficient room for dumping the excavation fill.

The location of all pits and room/compartment clearances is shown on S.P. 3A and 3B. Table 40 summarises the faunal remains, Table 42 the vegetal, Table 43 the small finds, and Table 44 the sherds. A more detailed classification of small finds and sherds is given in Charts III and IV.

Test Pit 1

12 sherds

S.P. 3A
Figure CXV

Description

This was placed on the lowest of a group of terraces to the northwest of the site. The long axis of the pit was perpendicular to the back retaining wall of the terrace and extended out 4 m from this as far as the front retaining wall. The short axis of the pit measured 1 m. No living floors were encountered in this pit or in nos. 2 and 3, which were placed on similar platforms, hence the distinction between layers is arbitrary, since there are no soil changes in the terraces. The surface contained gravels, pebbles and cobbles from the local granodiorite rock. This same rock is used for the terrace retaining walls which were unmortared. There were goats' faeces on the surface and two sherds, one of which was from a Cuzco-style plate.

Layer 1 This layer was 20 cms in depth and consisted of hard, compact, light brown soil which was reddish in the north corner. It contained plenty of gravels, pebbles and cobbles, which made digging difficult. In the centre of the northeast face a concentration of charcoal and ash appeared. This seemed to be the remains of a

fire, for there were burnt twigs, charred maize cobs and beans as well as bean pods. There were no sherds associated with this feature, although a couple came from other parts of the trench together with a few fragments of shell. The sherds were LH.

Layer 2 This varied in depth between 35 and 45 cms. The back retaining wall of the terrace just extended into this layer. The stones of the retaining wall were piled up with a slight inward batter and use was made of any existing boulder. There were a couple of sherds from this layer. The excavation was abandoned in sterile soil about 60 cms from the surface.

After the next two pits had been excavated, we extended the pit a further metre along the front retaining wall to form an "L" shape. This extension was called pit 1A and was undertaken to see if there was any organic material piled up behind the front retaining wall, as occurred in pits 2 and 3. In fact, there was very little, merely a few sherds, some twigs and lucuma stones.

Interpretation

Although there is rubble in the fill from the platform, there is not enough to suggest that the terraces were built up. On the contrary it seems that promising slopes were divided into different levels by means of the retaining walls, which made use of existing boulders. There is nothing in the excavation to suggest a perishable dwelling structure on top of the terrace and there are no milling stones in the vicinity, nor an obvious hearth, although there is evidence for a fire and cooking, the only hint that domestic activities were carried out there.

Test Pit 251 SherdsS.P. 3A
Figure CXVDescription

This pit was placed in a similar group of terraces, to the east of the previous ones, and between the second and third water-course to the north of the patio group. Again it was placed so that its long axis was perpendicular to the front retaining wall of the terrace. This side was 1.84 m long and its width was 1 m. The surface was similar to that of the previous pit.

Layer 1 This layer was 24 cms deep and a light brown colour. It was compact and hard and became a yellow ochre colour at the north end of the pit. At the south end, against the retaining wall, there appeared a certain amount of organic refuse mixed with a few sherds, one of which was a Brown Ware form I. This refuse appeared 8 cms from the surface and extended some 40 cms into the pit from the front retaining wall. The material consisted of shell fragments, charred twigs, raw cotton, cotton seeds, maize cobs, gourd and lúcuma. A bone awl was also found (fig. CII d). Some of the sherds are charred, indicating possible cooking vessels.

Layer 2 This layer is similar to the previous one and is over 30 cms deep. There were a great many pebbles and cobbles, as in layer 1. The refuse extends into this layer for a few centimetres. The sherds associated with it are LH, since some of them are in the Cuzco style. In the northwest corner a boulder appeared. After the organic material had been excavated, the pit appeared sterile and

was taken down a few centimetres more. It was abandoned 60 cms below the surface.

Interpretation

There are only two significant layers here; the soil from which the terrace is built, which is the natural topsoil of the barren quebradas in the study area, and the small layer of refuse against the front retaining wall. All terraces have a light downward slope towards their front wall, and it is likely that a rare shower will wash refuse down behind this. There is a greater variety of foodstuffs than in pit 1, and these suggest food processing and cooking activities. The awl is of the type found in weaving baskets in tombs (cf. Llanos 1936, lámina IX, 5/697), but there is no tomb in the immediate vicinity. On the terrace beneath the one with the excavation is a milling stone, which reinforces the idea that the terraces were dwellings.

Test Pit 3

42 sherds

S.P. 3A
Figure CXVI

Description

This pit was placed in an isolated terrace to the east of the previous complex and between the two branches of the third watercourse. Its long axis was placed as before, i.e. perpendicular to the front retaining wall of the terrace, from which it extended 2.67 m towards the back wall. The pit was 1 m wide. The surface was the same as that of pits 1 and 2.

Layer 1 The first layer was 10 cms deep and consisted of light brown soil mixed with the usual gravels, pebbles and

cobbles of granodiorite. It seemed to be slightly looser and less compact than the soil of the previous terraces. There were a few sherds, one of which had Cuzco-style decoration.

Layer 2 This layer had a more compact soil of a yellower colour with more gravel. Against the front retaining wall there was an accumulation of refuse that began 10 cms from the surface and extended about 20 cms into the trench. This refuse consisted of the same plants as before, plus peanut and pacae. There were also some charcoal fragments. There were some Cuzco-style sherds and some incised Black Ware. The pit was abandoned 50 cms below the surface, since it was sterile.

Interpretation

This pit is similar to the above pits with the accumulation of organic material and sherds behind the front retaining wall. Again, the evidence for domestic activities lies in the food plants and charred sherds. It should be noted, however, that there is, as yet, no evidence of hearths or fire pits.

Test Pit 4

9 sherds

S.P. 3A
Figure CXVI

Description

This was placed in a large southwest room of the patio group on the west side of the quebrada. It was a room with no surface refuse and, because of its size, it appears to have been an open courtyard. The pit was placed against the northeast

wall of the room, 2.28 m from the north corner, with its long axis perpendicular to a small bench, 30 cms high and 50 cms wide, that ran along the wall. The pit was 3 m long and 1 m wide. The surface was covered with goats faeces and the odd cobble. Probing near the bench revealed a floor level of packed mud which extended out into the room for some 1.50 m, where it came to an end (fig. CXVI).

Layer 1 This was 10 cms thick. At the northeast face another floor level appeared which merged with the upper one 1.50 m from the bench. The fill between the two floors contained goats faeces and a thin concentration of dark brown soil, probably decayed organic material. The soil below the floors was soft brown and fairly loose. In the southwest part of the trench there were some sherds from a single vessel with a charred exterior. This vessel was Brown Ware form I. There were also some cotton seeds, guanábana pips, and some animal long bones, which were unidentified, but possibly those of a goat.

Layer 2 This was 30 cms deep and sterile. The soil contained abundant gravels, cobbles and pebbles, and as one excavated deeper, it took on a yellow ochre colour. Standing upright in the centre of the pit was a log from a willow tree (*salix* sp.) with a sawn-off top. It appeared to my workman to be fairly recent. A huge boulder also appeared at the top of this layer. It covered almost half of the pit. The excavation was abandoned 40 cms below the surface.

Interpretation

The upper floor is, in my opinion, the present-day floor level and probably made by goat herders who use the ruins in their transit up and down valley. The second floor is associated with the base of the bench and is probably the pre-Columbian one. At present it is not clear why the floors should end in the centre of the room. One explanation is that activities were concentrated around the sides of the room rather than the centre, thereby causing the packing of the mud. It should be noted that none of the large courtyard rooms has an easily defined floor, unlike the interior rooms and compartments where it is more durable (cf. figs. CXXXIII; CXXXIV). Daily domestic activities need not pack down the soil very much, especially if not much time is spent inside a dwelling. The excavation yielded so little cultural material that it is uninformative about the function of courtyards. The lack of refuse on or beneath the floor suggests that this particular courtyard is a late LH addition to the building on previously unoccupied ground. Support for this is given by the fact that a Cuzco-style sherd was plucked out of the plaster of the northwest wall of this courtyard.

Test Pit 5

2793 sherds

S.P. 3A
Figure CXVII

Description

This pit was placed in the largest courtyard of the above-mentioned patio group. The courtyard measures 18 m by 12.50 m. On the east it is bounded by a high wall with four tombs behind it, and on the south by a number of rooms and passageways.

To the north there is another series of probable tombs and the west is bounded by a low wall, 40 cms high, which separates the courtyard from the open pampa. The long axis of the pit was perpendicular to the south wall of the courtyard and 4 m from its southeast corner. The pit was 3 m long and 1 m wide. The surface was a light beige colour and covered with gravels and pebbles, as well as sherds and goat faeces. Since my work at Avillay, much of this courtyard and some of the tombs have been destroyed by bulldozing.

Layer 1 This was approximately 10 cms deep and consisted of fairly loose, fine, beige soil that was mixed with dark reddish-brown patches of refuse. In this were textile, bone and shell fragments, as well as various plant remains. This layer ends on the west side of the trench with a heavy concentration of charcoal (layer 1A) which covered 1 m of the west face, was 7 cms deep and extended out into the trench for 20 cms. In addition, a layer of compact creamy soil, a couple of centimetres deep, extends from the south corner up to the charcoal on the northwest face (fig. CXVII). This layer was not traced elsewhere. Special finds were a bone awl and copper tweezers (fig. CV d).

Layer 2 This layer is 10 to 12 cms deep and consists of brown, loose soil mixed with dark patches of refuse. In fact, there is no soil difference between layers 1 and 2, which were differentiated because of the intervening layers on the northwest face. On all sides this layer ends with a couple of centimetres of grey-beige loose soil, as if

this were a former surface onto which refuse had been thrown. Special finds were part of a woven belt and a bone awl (fig. CII e).

Layer 3 This layer is about 10 cms deep in the west corner and 20 in the east corner. The soil has a similar consistency to that of layers 1 and 2, but with far more pebbles and cobbles and less refuse. Layers 1 to 4 all slope slightly northwards and downwards to the centre of the courtyard. The layer contained textile, bone, shell fragments, sherds and plant material.

Layer 4 This layer is about 10 cms deep on the northwest face and 18 cms on the southeast. It consists of a grey-beige coloured soil, more compact than the previous layers, and containing many cobbles and very little refuse. There are fewer sherds. Towards the north corner of the pit and close to the northwest face appeared three large cobbles, about 30 cms long. These showed traces of fire blackening. They were associated with the charcoal and ash of layer 6.

Layer 5 This layer was almost sterile. It consisted of ochre-coloured soil about 10 cms deep. It was hard to dig because of the many gravels and pebbles it contained. The wall at the southwest face of the trench rests on this layer, without there being signs of a packed mud floor. There were no artefacts other than sherds, and only a few fragments of cane.

Layer 6 This is a layer of charcoal, 10 to 12 cms thick, which has blackened the soil. It seems to stretch right under the wall on the southwest face and extends from there some 2 m into the pit. It does not reach the northeast face. There were a few sherds and some shell fragments¹.

Layer 7 This layer is a yellow-ochre coloured, compact soil that contains many gravels. It was taken down some 10 cms and proved sterile.

Interpretation

The trench was set against a half-ruined wall, which was 70 cms high, after being excavated. It probably once attained a height of 2 m, judging from the amount of rubble which is found on both sides and the present height of the east wall of the courtyard. This wall was not associated with a well-defined floor, but running underneath it was a thick layer of charcoal, which suggests burning activities at some period prior to the building of the structure. The blackened stones may have been part of a hearth. The excavation yielded three EIP rim sherds. Two were from layers 5/6 and one from layer 3.² It will be seen that other pits and compartments in this area also yielded a couple of EIP sherds in the bottom layers, which suggests that there was an occupation, or at least activities, during the EIP on this side of the quebrada. This is confirmed by the fact that to the northeast of the patio group and room clusters are several stone circles associated with EIP pottery (S.P. 3A).

The upper layers of the pit, numbers 1-4, are connected with the wall and contain LH refuse. The refuse belongs to this

period because there are abundant Brown Ware form I rims, Cuzco-style sherds and some Orange Ware sherds from forms VA, VIIA and VIII. There are four earlier rims: Brown Ware form III and Dark Brown Ware form II, but not enough to suggest a mixture of time periods. There is also a variety of vegetal remains, human hair, and some whole artefacts, such as a spindle whorl, a loom weight and two bone awls. All of this suggests, as it has done previously, that we are dealing with refuse from looted tombs. This is more than apparent when one remembers that there are tombs on at least two sides of the courtyard and a small group in the southwest corner.

NOTES

1. In chart II and Table 44 layers 5 and 6 have been combined.
2. Since these rims are plainware, their significance was not realised during the excavation and although some carbon was saved from that layer, it has not yet been submitted to any tests.

Test Pit 6

599 Sherds

S.P. 3A
Figure CXVIII

Description

In the west corner of the same courtyard is a group of four compartments built against the northwest and southwest walls. The exterior dimensions of the group are 5 m by 3 m. All compartments are rectangular and no.4 has an entry from

the courtyard. The test pit is 3 m long and 1 m wide. It extends from the northwest wall of the courtyard alongside the exterior wall of two compartments, nos. 5 and 4. The walls of these compartments are badly destroyed, that of no. 5 being about 28 cms high and that of no. 4 averaging 80 cms. Before the pit was laid out, compartment 4 had been cleared and a break noted in its exterior wall. Although the sides of this break are rough, a floor continues from the courtyard into the compartment through the break, so that there may well have been an entrance there, (fig. CXVIII). There was no entrance from the courtyard to compartment 5. In fact, the soil of the test pit overlay the exterior wall of the latter compartment although the outline of the wall could be traced. The surface was a grey-beige colour and covered with gravels, pebbles and cobbles, but there were no sherds.

Layer 1 There was a depression at the northwest end of the pit and this was excavated first. Its contents were later included with layer 1. The depression proved to be loose fill inside a small arrangement of two large flat stones, A and B on the plan (fig. CXVIII), which had been placed upright onto a packed mud floor and used as the walls of a small pit, 60 cms square. The fill was greyish earth mixed with a few Brown Ware form I rims and bits of bone, twigs, lúcuma and what appeared to be lumps of dung. After the pit had been cleared layer 1 was started. This was 8 cms deep at the northwest wall and 20 cms at the southeast end. It consisted of grey-beige loose, powdery soil mixed with pebbles and cobbles. There was a small amount of refuse which included

crayfish claws, shell, maize, cotton, bone and textile fragments. There were a couple of hundred sherds, half of which were very blackened.

Layer 2 This is 20 cms deep at the southeast end and tapers out two thirds of the way along the pit, where it tapers to a depth of 3 cms. The soil is loose and a dark brown, with more refuse and sherds than in the previous layer. The top of another upright stone, (C), was discovered 15 cms to the southeast of B. In layer 3 this was seen to form the side of another small square, about 60 by 40 cms. The packed mud of the floor ran onto the sides of these stones, as if they had been covered with it, like the cache in the middle of compartment 6 (q.v.). Layer 2 was taken down as far as the floor where this existed, and just beneath this level where it did not. The refuse was similar to that of layer 1, but there was double the quantity of sherds, half of which were blackened.

Layer 3 This is of a similar consistency to the two previous layers, but greyer than layer 2. It has little refuse. It is 30 cms deep at the northwest wall, and extends down as far as the floor. Layer 3 extends eastwards to the centre of the test pit, where it finishes under layer 2. There was some organic material but no sherds in this layer. The pit was not excavated further.

Interpretation

In this test pit it is the quantity of refuse, rather than soil type, that distinguishes the three layers. Except for a

hammerstone, there were no complete artefacts and the sherds were all LH, the wares occurring in similar proportions to those in test pit 5. The forms were the same as those described for test pit 5, but there were no LIP ones. There were no human or animal bones, but there was some human hair. Given the fact that the compartments are tombs, the refuse most likely comes from grave offerings and vessels originally placed in these tombs.

The enigma of this test pit, however, lies in the floor and the small square structures. The floor of packed mud extends outside the compartments, but it was not found in pit 5 in another part of the courtyard. It may be that other compartments were planned and therefore a floor was prepared for this end of the courtyard. Our trench, being only 1 m wide, could not explore its extent or the possibility of further walls to the northeast. On the other hand, the whole courtyard could have had a floor. Its absence in test pit 5 could be due to destruction by grave looters, as happened to part of the floor in test pit 6 and in compartment 4. The whole courtyard would need to be properly sampled in order to find this out, for the excavations show there is about 50 cms of refuse here.

There are two ways of interpreting the small structures in test pit 6. They could represent steps for access onto the northwest wall of the courtyard, which is over 70 cms wide, but in such a case the fill should have been heavier, with more cobbles, and it is unlikely that an architectural feature such as steps would have been destroyed. The second possibility is that they represent small caches for the burial of infant bones or other offerings. One such cache exists in compartment 6 (q.v.). This is also a squarish arrangement of stone slabs, about 20 cms a side, and

plastered over with mud. This cache was also close to the west wall (cf. fig. CXXXIV). Such caches were more likely to be destroyed by looters, although the one in compartment 6 has remained almost intact. They need not necessarily have been used for bones, but for the burning of offerings, much like a ritual pukara in a modern highland corral¹.

NOTES

1. These are sacred places in the corner of a corral that must not be trodden on by man or beast. They are surrounded by a stone wall and offerings are burnt there. Unfortunately I have no information on their size (Dalle 1971, p.41).

Test Pit 7

3492 sherds

S.P. 3A
Figure CXIX

Description

This test pit was placed in an exterior courtyard in the northeast of the same patio group that contained pits 4, 5 and 6. This courtyard is bounded on three sides by the exterior walls of the patio group but is open to the northeast, where it leads to a passageway that separates the patio group from a smaller rectangular room cluster. The test pit was placed 6 m from the south corner of the courtyard and perpendicular to its southeast wall. It was 3 m long and 1 m wide and was marked out 30 cms from the wall, which was over 1 m high. The surface of the trench sloped down towards the northwest where it almost met the remains of a semisubterranean wall. One metre to the northeast is another broken wall that extends out from the main wall

in a northwest direction. It has only one layer of stones and these are boulders of the type used for the base of walls in most buildings. This wall is possibly unrelated to the main building and is simply an earlier wall, as are the remains of semisubterranean walls that abut the main structure in several places. They are marked on S.P. 3A.

The surface of the pit is grey-beige in colour with abundant gravel, pebbles, cobbles and goat faeces. There were some sherds which were included in those of layer 1.

Layer 1 This consists of grey-beige topsoil some 5 to 10 cms deep. There was a certain amount of refuse there, consisting of textile fragments, vegetal material, bird feathers, human and animal hair, charcoal and camelid bone. There were some 500 sherds, one third of which were charred and many of which were very small.

Layer 2 This was from 10 to 15 cms deep and consisted of loose, dark brown soil mixed with organic material and a great deal of gravels, pebbles and cobbles, more than had been seen in any test pit until that point. The refuse was similar to that mentioned for layer 1, but was in greater quantity. Special finds included a bone awl, a worked chert flake and a spindle whorl (figs. C a - c, j; CII e). There was double the amount of potsherds and many of these were very small and almost half were charred.

Layer 3 This is a continuation of the previous one, the separation being arbitrary in case there should be differences in the pottery. It was from 15 to 20 cms thick and was taken down to where it ended, except in the west corner.

It was similar to layer 2 in colour and amount of refuse. Special finds included a stone loom weight (fig. C 1), a sherd disc (fig. XIX f - h), some worked stone (figs. C j; CI d), and some specially shaped pieces of cane for the teeth of a comb.

Layer 3B This is a pocket of the same dark brown soil with associated refuse that extends further down into the west corner of the pit and not elsewhere. This pocket attains a depth of about 30 cms below layer 3. It contains similar refuse to that of layers 2 and 3. Special finds include part of a sherd disc, a wooden peg (fig. CII g) and a broken thorn needle, (fig. CIII b).

Layer 4 This layer was taken down 20 cms in the south and east part of the trench and 40 cms in the north corner. It is a yellow-ochre coloured soil with abundant gravel and cobbles. It was sterile and so difficult to dig that the centre part of the test pit was left unexcavated.

Interpretation

There was nothing in this test pit to relate to the semi-subterranean walls in the courtyard, except for two EIP rims from layer 3B. This finding of early sherds in the lower layers of a test pit has been commented on previously. They probably do date the semisubterranean walls, since it is around similar structures, some 50 m to the northeast of the present excavation, that other EIP sherds are found on the surface. Similar walls are also found close to the north corner of the patio group. They were probably abandoned by the time the latter was built and at some time during or just after the LH refuse was thrown

around them. The bulk of the refuse is LH because there are Cuzco-style and Brown Ware form I sherds in all layers. However, there are also some LIP sherds: Brown Ware form III, and Dark Brown Ware forms I and II mixed with these in all layers. This suggests that the northeast rooms of the patio group could be earlier than the southwest ones.

The refuse also contains some whole artefacts plus the variety of plant material and bone that has been found elsewhere. Since there are tombs behind the southeast wall of the courtyard, it is likely that this refuse derives from looting activities there for reasons that have already been discussed. The small size of some of the sherds might suggest otherwise, i.e. that they were discards from broken pots that had been further smashed through trampling. However, there is the further possibility that the refuse could be the result of both kinds of activity: LIP and LH discarding and post-LH looting.

Test Pit 8

354 sherds

S.P. 3B
Figures CXX-CXXIII

Description

This pit was placed in the structure with the gabled roof at the upper end of the site on the east side of the quebrada. The architecture of the building is discussed in chapter V, which should be referred to for an interpretation of its function. The pit was marked out against the southeast and southwest walls, extending 2 m in both directions from the south corner of the room. The pit extended along the southeast wall as far as a small wall which projected out at a right angle from the latter. The pit

extended along the southwest wall almost to the door. The present surface was smooth and level because at some time in the past a huayco had flooded the sides of the quebrada fan and left a thick, hard deposit of consolidated silts. From this excavation and the subsequent one in the courtyard of the building, it would appear that this is a unique phenomenon, since there is no banding of layers of silt and sand. It must have occurred during a period of heavy rainfall on the coast.

Layer 1 This consisted of fine-textured, but hard, yellow-ochre coloured soil. It was 20 cms thick on the northwest face of the pit and 40 cms on the southeast face. It was completely sterile.

Layer 2 This was a soft layer of grey, waterborn sand, 20 to 40 cms in depth, and also devoid of cultural material except for a few sherds, one of which was Black Ware with a snake in relief. Against the southeast wall was a thin layer of white painted plaster that probably fell from the wall into the mass of moving mud and sand.

Layer 3 This is a layer of mid-brown earth with a reddish tinge. It is 5 to 10 cms thick except against the southeast wall, where it does not exist and the layer of sand is deeper. Some charred sherds, Brown Ware sherds, charcoal and twigs were found in it. As it ended, a floor appeared, 50 cms below the surface in the northwest part of the pit. The floor was of packed mud with traces of white paint in places. It was well preserved at the northwest end of the pit. Against the southeast face it was badly damaged and layer 2 had obliterated layer 3, which is

the occupation layer of the floor. At this point it was decided to excavate only the northeast half of the pit in order to leave part of the floor intact. Both the southeast wall, which has a mural, and the small partition wall running along the northeast face of the pit end with this layer and are associated with this floor. In both the silt and the sand layers the mural has been obliterated.

Layer 4 This was a fill of brown soil containing cultural material and was about 40 cms deep. It ended at a packed mud floor. As it was excavated, a small bench appeared running parallel to the southeast face of the pit and on top of a new floor. The bench was 42 cms wide and 20 cms high, and was constructed from a row of large cobbles with a flat face and a rubble fill behind. It had been plastered over. The fill contained vegetal material, some unidentified bone fragments, charcoal and more sherds than in the previous layer, including some in the Cuzco style. The floor, which ran up to the bench, appears to have extended into the unexcavated portions of the pit and room. There are some 40 to 50 cms between the two floors. In order to keep the relationship between floors and other features clear, only one quarter of the original pit was now excavated. This was the northern quarter, which was taken down below the level of the second floor.

Layer 5 This consisted of brown soil that contained more gravel than the previous layer. It varies in thickness between 15 and 45 cms, the latter being the depth along the southeast face of the pit. This layer contained half as many sherds as the previous one, and these were chiefly Brown Ware or charred. There were also some shell fragments and a small amount of vegetal material. At the bottom of the layer large boulders and cobbles started to appear.

Layer 6 This layer was a yellow ochre colour and fairly soft, although it contained much gravel. As it was excavated a child burial was found against the northwest face of the square. Its face was close to the west corner (fig. CXX). It was lying face upwards and extended with its arms by its sides. The body was 80 cms long and seems to have been wrapped in a plain weave cotton textile, which has mostly decomposed. There were no grave goods, vessels, or sherds associated with the burial. Although Chart III shows a few sherds from this layer, they appear to have fallen in from layer 5. None of them are pre-LH for they include Cuzco-style sherds. The pit was dug a further 10 cms below the burial, but the layer proved to be sterile. The bottom of the pit was 1.80 m from the surface.

Interpretation

The lack of grave goods hinders the dating and interpretation of the burial, which may be an offering or a sacrifice for the auspicious completion of a building¹. It may be connected with the lower floor and bench, but it is some 50 cms beneath these

features, and it is possible that it has nothing to do with them. There were a few pieces of charcoal around the body and these have been saved for future radiocarbon dating. Since the layer between the two floors contains Cuzco-style sherds, the lower floor and bench must have been constructed just before or during the LH. It may not necessarily be connected to the room with the gabled roof, since the walls of this are associated with the upper floor and have ended by the time the lower one is reached. It would seem that some time later, during the LH, a large rectangular room with a gabled roof was built and a new floor laid. In fact the southeast wall of the gabled room runs parallel to another wall (see S.P. 3B) and may well have been added to an existing structure. Some time after the abandonment of the building, a flood covered the floor, which has a small amount of debris on it, thereby sealing it in, but destroying the lower 60 cms of the mural.

NOTES

1. See Vallée and Palomino Flores (1973, p.14) for a modern account of human sacrifice connected with the building of a church. Also Donnan and Mackey, 1978, Appendix II for a discussion of pre-Columbian child sacrifice.

Test Pit 9

474 sherds

S.P. 3B
Figures CXXIV-CXXVII

Description

This was placed in the courtyard in front of the structure with the gabled roof. In the west of this courtyard is a group of three half-destroyed rooms. The pit was placed against the

wall of the middle room, 1.24 m northeast of its entrance. It extended out at right angles from the above wall for 3 m and was 1 m wide. Like the interior of the gabled structure, the courtyard was covered with a hard layer of consolidated silts deposited by a huayco. The surface was level and yielded no cultural material. The wall behind the pit has been badly damaged and is probably only half its original height.

Layer 1 This is exactly the same as layer 1 of pit 8. It was 18 cms deep at the northwest end and 24 cms deep at the southeast end. It was sterile.

Layer 2 This layer is a grey colour and easier to dig because it contains sand which concentrates at its base. It ends in a mud-packed floor which dips towards the centre of the pit. At the northwest end of the pit the floor has been broken and is covered with debris from the ruined wall. The layer varies in depth between 15 and 60 cms and contains Brown Ware form I, Orange Ware and Cuzco-style sherds.

Layer 2A The debris from the wall was excavated separately as another layer. The wall had already collapsed before the huayco flooded the area. The debris consisted of cobbles, boulders and mud mortar from the wall, mixed with grey-brown earth, a little sand and some sherds, mainly Brown Ware. The layers extended half way along the pit towards the southeast face. The floor beneath layers 2 and 2A was about 5.5 cms thick and was associated with the courtyard wall whose base was 12 cms below it (fig. CXXVII). Only sherds were found in layers 2 and 2A.

Layer 3 A portion of the floor, 30 cms wide, was left unexcavated at the southeast end of the pit. Layer 3 was the fill beneath the floor. This consisted of loose brown soil mixed with patches of darker brown refuse and charcoal. A concentration of the latter was noted in the south corner, extending along the southeast face of the pit. The layer contained a little vegetal material mostly from maize, peanuts and gourds. There were more sherds than in layers 2 and 2A. These included some in the Cuzco style, Brown Ware and Orange Ware. Human bones appeared at the base of the layer.

Layer 4 The burials were made in this layer and the fill subsequently worked its way around them. There were four actually inside the pit and another (burial 5) visible in the southwest face (figs. CXXIV; CXXV). Of the four in the pit none was complete because the bones extended under the southwest and northeast faces. They were buried in a grey-beige, sandy, loose soil and the graves appear to have been dug through the floor which was then relaid. Only three skulls were found. From their position and that of the other bones it would appear that all burials were extended, lying flat on their backs or side, with the face looking eastwards.

Burial no. 1 is stretched over almost the whole width of the pit, the head being 7 cms from the southwest wall and 1 metre from the northwest wall. The skeleton is lying on its back with its arms folded across the breast. The maxilla is missing from the cranium and the tibiae extended into the northeast face. There was still plenty of hair

around the cranium. In the soil were the impressions of a textile that had been used to envelop the body including the head. When the bones were removed a corroded copper pin was found to the right of the neck, and this may have been used to fasten the textile.

Burial no. 2 was to the north of this. It was an adolescent which lay on its back, its head resting on a small stone wall. Its arms were also folded over its chest although one radius was found under the rib cage. Its head was inclined towards the east. The long bones were also under the northeast face of the trench and part of the left temporal and parietal bones of the skull had been smashed prior to excavation. The burial was 80 cms from the northwest wall and there were also impressions of a textile in which it was wrapped, around and under the bones.

Burial no. 3 extended from the southwest wall over nearly all the width of the pit, but only the pelvis, longbones and feet were inside the excavation, the rest lying under the southwest face. The knees were bent as if the body had been lying on its side. The right patella was 52 cms from the northeast face and around the pelvis were the remains of a cotton textile. The arms may have been clasped in front of the body with the hands at the level of the pelvis since the fingers were found inside the pelvis. Also near the pelvis was part of a rope-soled sandal and there were more rope fragments near the feet. There was a Cuzco-style sherd near the body.

Burial no. 4 was represented only by the skull and some of the cervical vertebrae, the other bones being under the northeast face. Like burial 1 it also possessed abundant hair. A few fragments of textile found near the skull suggest that this body too was wrapped in cloth. The burial is 1.20 m from the southeast face. .

With regard to their vertical position in the pit, burial no. 2 is 1 m from the surface, whereas the other three are between 1.13 to 1.20 m from the surface. Burial no. 5 is different from the others, in that it appears to have been placed at the base of layer 3, at 94 cms from the surface. Only part of the feet are visible.

A comparison of the skulls of burials 1 and 4 with other skulls found elsewhere on the surface of the site suggests that they were both females, because they are less robust than some and on the small side. The pelvises of burials 1 and 2 (the adolescent) also suggest females because of the wide sciatic notch. That of burial no. 3 was in poor condition and so no determination was made in the field.

When the bones had been removed, the small wall on which burial 2 partly rested was uncovered. It was only 30 cms high and extended out into the pit for 50 cms from the northeast wall. It consisted of a double layer of stones with some mud mortar still adhering to them. Part of another wall was also visible on the southwest face. Neither of these walls had any sherd or other cultural material

associated with them, other than the fact that burial 2 rested on one. The sherds in layer 4, in refuse around the burials, included Brown Ware, with some form I rims, a few Cuzco-style sherds and, most important of all, a tiny fragment of glazed ware. The pit was taken down another 10 cms and proved to be completely sterile.

Interpretation

As with the pit at Panquilma, this excavation reveals a stone wall in its lowest layer. The top of this wall is 92 cms below the surface and rests on water-born sands and gravels. There are no sherds that can be securely associated with it, other than those of the refuse that has fallen around the burials. This refuse can be dated from the LH to the Colonial Period because it contains Brown Ware forms I and V, Orange Ware form VIIA, a few sherds in the Cuzco style and one Colonial sherd. The wall could predate the LH by many years, or have been built during this period. There is another possible wall visible in the southwest face (fig. CXXV). Until the entire courtyard can be cleared, it is suggested that any structure below the fill of the floor can be dated from the beginning of the LIP onwards on the grounds that, to the best of my knowledge, no EH, EIP or early MH structure is ever found in the path of a huayco, which is where the courtyard is located.

The one Colonial sherd in the fill beneath the floor shows that the burials were made during or after that period. Burial no. 2 alone rests on part of the stone wall, which is unlikely to be connected with them, since one would expect to find burials enclosed by a wall, but not resting on what appears to be a broken one. The position of the skeletons is different from that of the majority of

known Inca burials, from highland or coast. These are usually in a foetal position or cross-legged, whereas the ones in the excavation are all extended.¹ This fact, coupled with the lack of grave goods, the missing and misplaced bones, the tattered textile which shows evidence of charring, and the fact that two have hair and one has none, suggests a secondary burial in the Colonial Period. It is possible that they are skeletons salvaged from looting Spaniards and reinterred in a less conspicuous location. The fact that some care has been taken over the positioning of the bones strengthens this hypothesis². The bodies could be those of people who died during the LH or even earlier. Further excavation should confirm or disprove this hypothesis.

These burials were made by excavating through the floor and the underlying fill. This fill consists of some small sherds, and some scant vegetal material.³ There are no artefacts. All this suggests that it is primary refuse, i.e. what was genuinely discarded in pre-conquest times. A floor was laid over this refuse. It presents a dating problem. On the one hand, it should be LH in date because it is associated with a group of structures that are also considered to be LH on architectural grounds, the kind of painting found on the exterior walls, and the surface and excavated sherds found inside them (see Chapter Five). On the other hand, the fill beneath the floor contains a Colonial sherd, which would suggest that the floor, which must be later than the fill, was laid in the Colonial Period. In this case the courtyard and at least the small rooms behind the test pit must also be of Colonial date since the floor is associated with them. At present, however, there is only one Colonial sherd from around the burials in layer 4 and, given their incomplete state, it could have been deposited with them. This would mean that the occupants of the site dug through the floor

in order to make the burials and then relaid it. My photographs show that the floor is not smooth above the burials but dips. This dip is beyond the extent of the debris from the walls (figs. CXXV; CXXVI) and is likely to have been caused by the subsidence of loose fill around newly-made burials. This is the explanation preferred until the whole courtyard can be excavated.

NOTES

1. See Béjar 1976, p.150 for a highland burial; Ravines and Stothert 1976, lámina 12 for a coastal one.
2. Such re-burials are known from the Rimac valley - James Vreeland, personal communication, 1979.
3. There were only five plant species - see Table 42.

Test Pit 10

4963 sherds

S.P. 3B
Figure CXXVII

Description

This pit was placed south of the courtyard with the gabled structure on a slight slope down towards the main water course. It was 2 by 2 m and oriented so that its northeast face was parallel to the southwest wall of the courtyard, which was 6 m away. This location was chosen because of the large pile of refuse there which, it was thought, might have been the result of activities in the courtyard or in one of the nearby structures. This refuse extends southwards beyond the square and has been overrun by the huayco that deposited such a thick layer within the above-mentioned structures. However, it has not covered the refuse so well,

because the solid walls of the gabled room and courtyard bore the brunt of the flood. At a later date other huaycos of less consequence have cut through the side of the deposit, thereby revealing one face of the refuse. A Venetian glass bead (fig. CV 1); a pair of tweezers (fig. CV d); and two bone awls (fig. CII b, c) were found on the surface and nearby.

Layer 1 This was from 2 to 5 cms thick and consisted of the same hard, consolidated yellow ochre silts, as in pits 8 and 9. It was sterile.

Layer 2 This was from 1 to 14 cms thick and consisted of greyish sand. It was deeper in the centre of the pit where there were no boulders, as there were around the edges. At the base of the layer were numerous sherds (all from late wares), vegetal material, bone fragments and shell. A special find was a copper pin, like a small knitting-needle (fig. CIV e).

Layer 3 This was between 5 and 10 cms deep and consisted of fine, loose, dark brown soil mixed with refuse and some pebbles. In the south corner, at the base of this layer, was a patch of lime which extended 20 cms in either direction. There were numerous Brown Ware sherds, plus some Orange Ware and a few Cuzco-style, Black Ware and Colonial sherds. There was a variety of plant material (which included oca and potato), dog's hair, guinea pig droppings and bird feathers. Special finds included a fragment of iron and scraps of green felt, and green and yellow silk.

Layer 4 This is differentiated from layer 3 by a thin, hard layer of grey-brown soil which does not extend over the whole pit.

It is followed by another few centimetres of dark brown soil mixed with refuse. This pattern continues for other layers. The refuse was similar to that of layer 3 and contained bone, feathers, plant material and sherds, with Brown Ware predominating. Special finds included a copper tupu and a leather thong (fig. CIV f). During the excavation of this layer, several of the large boulders were removed, since they formed part of no structure.

Layer 5 This follows the same pattern as layer 4 in that a thin layer of hard grey-brown soil precedes a few centimetres of refuse. It is 5 to 10 cms thick. There was the usual variety of vegetal material, shell and sherds. Special finds included another tupu (fig. CV b); a copper pin (fig. CIV e) and a piece of worked cane (fig. CIII a).

Layer 6 This is differentiated from the previous layers in the same manner. It is 10 cms deep and ended in the south corner with a patch of charcoal. There was a piece of corroded copper sheet in this layer.

Layer 7 This layer is from 12 to 15 cms deep, with more pebbles and cobbles than in previous layers. It consists of the same dark brown soil as before but with less variety of plants. No special finds were made here, but there was still some shell, human hair, bone and textile.

Layer 8 This consisted of yellow-ochre coloured soils full of gravels, on which the majority of the large boulders at the edge of the pit rested. It was taken down 10 cms and proved sterile.

Interpretation

The copper and other artefacts, together with the textile fragments, patches of charcoal, human hair, bone, shell and variety of plant material suggest looted grave contents, tossed casually aside and partially burnt. The apparent layering of grey-brown soil and dark brown refuse does not extend over the whole area of the pit. It is probably the result of these grave contents being thrown around the boulders and working their way downwards through the force of the flood that eventually covered the refuse. There is a general similarity between the contents of each layer, not least in the sherds. Brown Ware form I is by far the most common form in each layer. Other Brown Ware and Dark Brown Ware are confined to one or two rims distributed in a random fashion. Orange Ware is sparse, and Cuzco style and Black Ware even more so. The three Colonial sherds come from layers 3 and 5 and there are also scraps of fabric and iron from this period. Therefore some of the burials were Colonial. The bead, for example, could have come from necklaces like those illustrated by Mujica Gallo (1967, plates CXVI-CXVIII).¹ This refuse probably came from tombs in nearby room clusters (see S.P. 3B).

NOTES

1. Uhle found similar bead necklaces at Chinchá (Kroeber and Strong 1924, p.9). Grave B at site E there contained an iron ornament and strings of spondylus and green glass beads.

Test Pit 116886 sherdsS.P. 3B
Figures CXXVIII-
CXXIXDescription

This was placed 45 metres to the east of the gabled structure , on a path between two room clusters (see S.P. 3B). Here there was a pile of refuse on a slope running downwards from southeast to northwest. There were numerous pebbles and cobbles on the surface and some sherds. A collection was made which included textile fragments and bone. Special finds included a worked sherd (fig. XCIX g); a copper spatula (fig. CIV h); a copper bodkin and a leather sole. A face was cut into the slope along the northwest side of the intended pit, which was 2 by 2 m. This face showed that the refuse was about 75 cms deep.

Layer 1 This layer was about 12 cms deep and consisted of fine, loose, dark brown soil mixed with cobbles and a quantity of refuse. There were Colonial sherds in this layer plus Brown Ware, numerous charred sherds, scant Orange Ware, Black Ware and Cuzco-style sherds. There was also some human hair, llama bones, feathers and shell.

Layer 2 The division between this and layer 1 is arbitrary, since the soil composition and refuse are identical, except that there are more maize stalks in layer 2. It is 10 to 12 cms deep. Unlike layer 1 there is no Colonial Ware. Otherwise proportions of sherds and wares are similar. Special finds include half of a wooden plate (fig. CIII c); a long copper bodkin (fig. CIV g); and a wooden needle (fig. CII i). Here, as in other layers, there were abundant guinea pig droppings.

Layer 3 This again is an arbitrary division. At the bottom of this layer a small patch of charcoal, 3 cms deep, appears half way along the southwest face. There is still a considerable quantity of sherds and a variety of vegetal material. Special finds include a stone tool (fig. CI d); a piece of copper sheet and a fibre sandal (fig. CVI f). At the end of this layer large boulders were appearing on all faces and on the floor of the pit (fig. CXXVIII). On one of them was a hard layer of mud about 10 cms thick, which may have been plaster fallen from the nearby wall of the building to the east. Outside the test pit, and extending from the north corner along the northwest face, was the edge of a small pit covered with stone slabs. The earth fell away through chinks in these, since there was no plaster overlaying them.

Layer 4 This layer is from 10 to 12 cms deep. The soil is a yellower colour and contains more pebbles and gravels. There is still the variety of plant material, some bone and hair. Sherds are especially frequent here, with Brown Ware dominating and an even greater number of charred sherds. There is also one rim from an EIP jar. Special finds included rope, cactus spine needles and some thread (fig. CIII b).

Layer 5 The soil here is darker than that of layer 4. Against the southeast face it is merely pockets of refuse that has fallen around the large boulder. There are half as many sherds here as in previous layers, but in similar ware proportions. There is still a variety of vegetal material plus textile fragments and rope. At the base of this layer are the covering stones of the pit.

Layer 6A This was the fill inside the man-made pit and consisted of refuse that had fallen inside. It contained some Cuzco-style sherds and some Black Ware, as well as numerous Brown Ware and charred sherds. There was still some human hair and llama bone fragments, but nothing to suggest that any of the material was earlier than the LH or any different from that of the layers already excavated. The pit was oval and unlined with no floor such as that found in the pit in compartment 5 (q.v.). It was about 80 cms in diameter and 40 cms deep.

Layer 6B This was the final layer and consisted of yellow-ochre coloured soil mixed with sands and gravels, with a little refuse in the upper 3 cms. It was excavated some 10 cms and proved to be sterile, except for about 100 sherds that had fallen from above or were part of the refuse. The pit had been dug into this soil.

Interpretation

The refuse in this test pit is homogeneous, as it is elsewhere. For reasons stated previously, the bulk probably comes from tombs in the nearby room clusters. Since the rooms were used for a variety of activities before they were used for burials, it is not surprising to find guinea pig excrement in the refuse.¹

It should be noted that in this test pit there are Brown Ware form III, and Dark Brown Ware rims in all levels, in similar numbers to those of test pit 7. A mixture of these sherds with Cuzco-style and Brown Ware form I sherds occurs on the surface of many room clusters on this side of the quebrada. On the high terraces above the room clusters, the surface sherds are invariably Dark Brown Ware

with no Brown Ware form I. On the terraces on the opposite side of the quebrada, the sherds are all Brown Ware form I with no Dark Brown Ware. This suggests that the refuse from the test pit belongs to two time periods: the LIP and the LH. The room clusters were probably built and used during both of these periods.

The small, oval man-made pit could well be earlier, even though its fill is late. Pits of similar size and shape are found on some of the upper terraces, but are uncovered (see S.P. 3A and 3B). There are two possible interpretations. It could either be a storage pit, as is often hypothesised, or else used as a cache. At present because it is covered, like the one in compartment 5, it is more likely to be a cache than a storage pit.² Whatever was once inside could have been removed for a variety of reasons.

NOTES

1. For an elaboration of these points see Chapter V of this thesis. This deals with the architecture and its function.
2. There is no evidence from the ethnography of the study area and the adjacent highlands that people ever store foodstuffs beneath the ground (see for example Matos Mar et al., 1964). This does not preclude their having done so in the past, but I think it unlikely.

B. Compartments

General Remarks

In addition to the excavation of test pits, six compartments in the patio group were cleared of the rubble and refuse that was inside them. Compartments 1 and 2 are marked on S.P. 3A¹ but are not discussed in detail here because they contained so much modern refuse, such as goat bones, chicken feathers and modern textiles, all mixed with ancient refuse which included human bone. The refuse of the other compartments was all pre-Columbian. They are all connected with the courtyard in which test pits 5 and 6 were excavated. Compartments 4, 5 and 6 are part of the small group which adjoined test pit 6, and Compartment 3 is close to the south corner of the courtyard.

Notes:

1. All compartments are marked with the letter "R" on S.P.3A.

Compartment 3

505 sherds

S.P. 3A
Figure CXXX

Description

Its location is marked on the main plan. It is one of a group of six compartments which have no access to any outside passage. Four of them appear to be self-contained, and two are interconnecting. A southeast one was chosen because at the time it was thought that its contents might be intact. It measured 2.42 by 1.66 m and was filled with rubble from its own walls, which must have once stood over 1.50 m above floor level, judging from their present height and the amount of rubble in the room. The first task was to clear this rubble, which was almost

1 m thick in places and mixed with goat droppings. There were no sherds or any other form of refuse with it. A portion of a well-made mortar was found in this rubble, but since the break was not fresh it may well have been incorporated into the wall. Once the rubble was cleared, the surface of layer 1 was visible.

Layer 1 This was from 10 to 15 cms in depth and consisted of loose brown soil mixed with refuse. It ended at a packed mud floor which had been broken through in places. The refuse consisted of sherds, mainly plainware - the majority of which were blackened, animal bone, shell, a variety of vegetal material and some fragments of plain textiles. Special finds included a pestle, a weaving instrument (fig. CIV a) and pieces of a wooden spoon (see Llanos 1936, lámina 6, 5/735). Beneath this layer is a centimetre or so of sterile floor which is broken around its edges near the wall. The wall rests on the floor and does not extend beneath it.

Layer 2 This layer is some 30 to 40 cms deep and consists of hard yellowish gravels mixed with some pebbles and cobbles. Around the sides of the compartment are small pockets of refuse, most noticeable on the northwest and southeast faces. They do not extend across the pit. The layer was taken down below these pockets and proved sterile. In this layer there were a third as many sherds as in layer 1 and well over half of these were charred. At the same time there was a variety of animal bone, striped and plain textile fragments, shell and vegetal material. Special finds included a spindle whorl (fig. C a - c) and a cactus spine needle (fig. CIII b).

Interpretation

With regard to dating, there was one EIP bowl rim in layer 2 below the floor. Otherwise the rest of the sherds from both layers were LH. There were rims from Brown Ware form I and Cuzco-style sherds in both layers. There were also some Brown Ware form III sherds. The EIP sherd could have been on the surface when the structure was built, or else incorporated in the mud mortar of the upper walls. When the compartment was looted and the walls destroyed, the sherd fell down with the other refuse, below the base of the wall. Since the refuse under the floor is concentrated around the sides of the pit, I feel that it is more likely to have worked its way down when the compartment was looted, than to be the result of activities prior to the building of the structure. Looting is inferred because the compartment immediately to the west of this one contained two human crania. These and the small finds from the excavated compartment suggest that its purpose was for burial.

The Courtyard Group - Compartments 4, 5 and 6

S.P. 3A
Figure CXXXI

Description

These form three of a group of four rectangular adjoining compartments in the west corner of the courtyard into which pits 5 and 6 were excavated. They are not all the same size, nos. 5 and 6 being 20 cms shorter than no. 4, which is 2 m long. No. 6 is 1 m wide and nos. 4 and 5 are 1.20 m wide. They were built as a group of four after the construction of the northwest and southwest walls

of the courtyard. The interior dividing walls of the compartments were the last to be built. The highest wall, at present, is the southwest wall of compartment 6 and even this has been partially destroyed and rebuilt by goatherds. It now reaches a maximum of 1.30 m above the compartment floor but was probably much higher. However, the amount of rubble in and around the compartments does not suggest that all the walls reached even that height. From my knowledge of compartments in better condition elsewhere, they were probably about 1 m high. The wide northwest wall was probably built up above compartments 5 and 6, where it was as much as 78 cms high. It was lower above the rest of the courtyard since it has very little rubble on either side. The height of the other walls varies between 40 and 80 cms at present. They are built of undressed granodiorite blocks and cobbles, laid in a double row to give a thickness of about 40 cms for interior walls. The outer walls are rubble filled between the two rows to give 30 cms extra width. Walls were covered with a single layer of mud plaster, traces of which can be seen in compartment 6. All of them had packed mud floors, apparently broken in compartments 4 and 6. Two compartments contained a pit or cache. When first viewed, the compartments had the appearance of a mound of debris. It was not until the exterior northeast wall was cleared and the break in it revealed, that it was decided to excavate pit 6 and to clear the compartments.

Compartment 4605 sherdsFigure CXXXIIDescription

This is the south one, with a presumed entrance from the courtyard. The entrance can only be inferred since the wall is broken here, but it is likely, because on one side of the break is a large smooth-faced boulder of the kind used for entrances, and because sets of compartments usually have an entrance to one of them.

Layer 1 This is debris from the clearing of the northeast wall, which was at first thrown into this compartment on top of what had already accumulated. It consisted of loose brown soil mixed with refuse and rubble from the destroyed walls. There were some 200 sherds half of which were charred. There were several in the Cuzco style. An iron nail was found in this layer, which contained a variety of vegetal material, charcoal and animal bone.

Layer 2 This was the original debris in the compartment and was of a similar nature to the previous layer. It contained animal bone, vegetal material, charcoal and sherds. Among these was an EIP rim. Special finds included a spindle whorl and a spindle. The layer was 40 to 50 cms thick and ended at the floor.

From the excavation, it was obvious that the floor ran under the walls of the compartments and was in existence before they were built. This is shown by the floor's extending beyond the break in the northeast wall and by its running under a missing lower block in the southwest wall. The floor was not level and sloped a few degrees

down towards the west. In the east there are impressions of grasses in the mud. In the centre of the compartment is a small mud barrier, about 66 cms from the northwest wall. It is 15 cms high and runs from the northeast to the southwest wall (fig. CXXXI). The floor runs up and over the barrier, which is broken in the centre, because a large hole has been made through the floor at the northwest end of the compartment. We excavated into the hole which showed that the floor was between 2 and 7 cms thick. Beneath it was layer 3, a sterile layer of yellow-ochre-coloured gravels.

Compartment 5

297 sherds

Figure CXXXII

Description

This is the north one of the group of four compartments. It has no entrance to the courtyard, nor to any other compartment.

Layer 1 As with no. 4, the first layer is the debris from the clearing of the northeast wall. It is about 20 cms deep, and consisted of the usual light brown, powdery soil mixed with refuse. There was a variety of vegetal material, charcoal, textile fragments and sherds, half of which were charred. There were few Cuzco-style sherds and one EIP rim.

Layer 2 This was about 30 cms thick and was the debris of the compartment. It consisted of the same kind of soil and refuse as before and ended at the packed mud floor which was in poor condition, the worst of any of the compartments. At the southeast end of the compartment it just covered some large stone slabs. The earth fell away and

it was obvious that these were slabs roofing a small pit. They were held in place by mud mortar. One of the large covering slabs extended right under the south-east wall of the compartment, proving that the pit was in existence before the floor was laid and the compartments built. The pit itself was crudely lined in stone and had a packed mud floor. It was oval and was 86 cms long, 41 cms wide and 38 cms deep. Inside were two tiny fragments, less than 1 cm long, of yellowed bone, one of which appeared stuck to the floor. There was nothing associated with these nor were there any sherds below the floor.

Compartment 6

203 sherds

Figure CXXXIII

Description

This was the west compartment and the last to be excavated. The remaining one was not cleared.

Layer 1 This consisted of brown, powdery soil mixed with vegetal material, animal bone, charcoal, textile fragments and sherds. Half of the latter were charred and most of the rest were Brown Ware, together with a few in the Cuzco style. A special find was a wooden spatula? (fig. CII h). Two EIP sherds were found in this layer which was taken down to the packed mud floor. This was in good condition except for a circular hole, 50 cms in diameter, in the southeast and another hole around the feature. This feature

was a small cache in the west corner. It consisted of a small square, 39 by 38 cms, made of stone slabs and covered with another. It stood 20 cms high above the floor of the compartment and the packed mud of this ran up onto the stones, as if the feature were built just before the floor was constructed. Inside this cache was found the skull of an infant over one year old, but no postcranial skeleton. Like the pit in compartment 5, this cache did not appear to have been disturbed in post-conquest times and there was nothing else associated with it.

Interpretation

The three compartments were all filled with refuse dated as LH because of the occurrence of Cuzco-style sherds and Brown Ware form I rims. There were a few earlier Dark Brown Ware rims in pit 5. Each compartment also contained one or two EIP sherds, but always mixed with the LH ones and never beneath the floor level. It is possible that they come from the mortar or plaster of the compartment walls. Excavations were only conducted under the floor level in portions of compartments 4 and 5 and in each case the soil proved to be sterile. Although there were only a couple of complete artefacts in the refuse, it was similar to what has been noted in previous excavations, and is likely to have come from offerings and grave goods in tombs that were subsequently looted. It is true that the preliminary analysis of the bone material from these compartments has not specified human bone, but, as discussed previously, mummies were reburied or burnt by the Spaniards, or reburied by relatives. In any case, the infant cranium of the small cache in compartment 6 suggests an initial sacrifice or offering, from which the purpose of the compartments can be inferred. This

cache is clearly associated with the building of the compartments. On the other hand, the pit in compartment 5 may be contemporary or earlier. Since there are bone fragments inside it, one might infer that its purpose was mortuary, its size suggesting a child rather than an adult. Its contents could have been removed by those who built the compartments for a variety of reasons that can only be guessed. It is unfortunate that it has no other associations, but it must be stressed that neither this nor the cache seem to have been disturbed by those who looted the compartments and who probably dug the hole in no. 4 in their search for burials. Why pit and cache were untouched remains a mystery.

TABLE 42PRELIMINARY IDENTIFICATION OF VEGETAL MATERIAL FROM TEST PITS
AND COMPARTMENTS AT PV48-137, AVILLY

<u>Name of Plant</u>	<u>Test Pit</u>										
	1	2	3	4	5	6	7	8	9	10	11
Caña Brava					x		x			x	x
Carrizo					x		x			x	x
Totora											
Junco			x								
Maíz	x	x	x		x	x	x	x	x	x	x
Achira					x		x			x	x
Palta					x	x		x		x	x
Maní			x		x		x	x	x	x	x
Tara											
Pallar		x			x		x			x	x
Frijol	x				x		x			x	x
Pacae							x			x	x
Oca										x	
Coca											
Ciruela del fraile					x	x	x		x	x	x
Yuca					x		x			x	
Algodón		x	x	x	x	x	x			x	x
Palillo											
Guayaba					x		x			x	x
Boliche						x					x
Lúcuma	x	x	x		x	x	x			x	x
Camote											
Ají											
Papa							x			x	
Zapallo											
Calabaza											x
Mate	x	x	x		x	x	x	x	x	x	x
Guanábana				x	x					x	x
Molle											
Jabón del Monte (?)					x						x

TABLE 42 (cont.)

<u>Name of Plant</u>	<u>Test Pit</u>										
	1	2	3	4	5	6	7	8	9	10	11
Sauce (Salix sp.)					x		x				
Unidentified Tree	x	x	x		x			x	x	x	x
Pita (Agave sp. or Furcraea)						x	x				
Unidentified Root							x				
Tillandsia											x
Total Number of Species per Layer	4	6	7	2	18	8	18	5	5	19	20

- - - - -

	<u>Compartments</u>			
	3	4	5	6
Caña Brava	x			x
Carrizo	x	x	x	
Maíz	x	x	x	x
Achira	x			
Palta	x	x	x	
Maní	x	x	x	x
Tara				
Pallar	x			
Frijol	x			
Pacae	x			
Ciruela del Fraile	x			
Yuca	x			
Algodón	x	x	x	x
Palillo				
Guayaba	x	x	x	
Boliche	x			
Lúcuma	x	x	x	x

TABLE 42 (cont.)

<u>Name of Plant</u>	<u>Compartments</u>			
	3	4	5	6
Zapallo	x			
Calabaza				
Mate	x	x	x	x
Guanábana	x	x		
Unidentified Tree	x	x	x	x
Total Number of Species per Compartment	19	10	9	6

Notes:

This is a summary by pit, not layer.

The botanical name is not given again unless the plant is not found at Panquilma (see Table 41).

TABLE 43 (cont.)

<u>Material</u>	<u>Fig.</u>	35	137				137						137	
		TP	SU				TP						CO	
		1		5	6	7	8	9	10	11	3	4	5	6
<u>Shell</u>														
Bead/ Pendant	CVg,h,k	x	x											
Mother-of- Pearl	CVe	x												
Spondylus	CVf,i,j	x	x											
<u>Fibre</u>														
Shoe sole	CVIf			x				x		x				
Mat	CVIg	x												
Netting	nd	x		x										
Ichu Basket?	nd		x											
Rope	CVId	x		x		x		x	x	x		x		
<u>Leather</u>														
Sandal/ Strap	CVIa-b	x								x	x			
<u>Animal</u>														
Fur Pouch	nd	x												
Feather Adornment	nd	x												
Hair Rope	nd					x				x		x		
<u>Glass</u>														
Bead	CVl-n	?	x							x				
<u>Iron</u>														
Nail	nd												x	
Horseshoe	nd		x											
Knife	nd		x											
Other	nd		x							x				

TABLE 43 (cont.)Key:

TP	=	test pit
CO	=	compartment
SU	=	surface
nd	=	not drawn
x	=	present

Notes:

This table has been drawn up on a presence/absence basis.

Chart IV should be consulted for the number of finds per layer, per pit.

Test pits 1-4 at Avillay are not included because there were no small finds from them, except for a bone awl (fig. CII d) from layer 1 of pit 2. Small finds from the general surface collection at Avillay are included because they were so numerous.

TABLE 44SUMMARY OF SHERDS FROM EXCAVATIONS AT PV48-35, PANQUILMA, AND
PV48-137, AVILLAY

<u>Test Pit</u>	<u>Layer</u>	<u>Br.</u>	<u>Or.</u>	<u>Cu.</u>	<u>Bl.</u>	<u>Col.</u>	<u>EIP</u>	<u>U/C</u>	<u>Total per Layer</u>
---------------------	--------------	------------	------------	------------	------------	-------------	------------	------------	--------------------------------

Site PV48-35 (Panquilma)

1	Surface	21	104	26	29		1	365	816
	1	3	54	5	11			529	602
	2	18	63	11	32			2120	2244
	3	9	44	6	9			1229	1297
	4	4	50	13	12			1234	1322
	5	9	42	4	36			1188	1279
	6	16	69	15	23			2537	2660
	7	1	17	7	15			1205	1245
	8	10	33	1	5			1223	1272
	8B	26	53	3	6			1655	1743
	9	7	16	1	5		1	1248	1278
	9B	13	49	5	5			2149	2221
	10	1	4					224	229
Totals		138	598	97	188	-	2	17185	18208

Site PV48-137 (Avillay)

1	All Layers	3		3					6
1A	All Layers	4		2					6
		7		5					12
2	1	7	2	4				10	23
	2	2		5				5	12
	3	7		2				7	16
		16	2	11				22	51

TABLE 44 (cont.)

<u>Test Pit</u>	<u>Layer</u>	<u>Br.</u>	<u>Or.</u>	<u>Cu.</u>	<u>Bl.</u>	<u>Col.</u>	<u>EIP</u>	<u>U/C</u>	<u>Total per Layer</u>
<u>Site PV48-137 (cont.)</u>									
3	1	16		4				3	23
	2	4						3	7
	1/2	8	1	1	1			1	12
		28	1	5	1			7	42
4	All Layers	1						8	9
5	Surface	32	3						35
	1	634	37	15				450	1136
	1A	38	4	4	1			76	123
	2	405	49	11				295	760
	3	232	25	7			1	222	487
	4	64	18	2				138	222
	5/6	16	2	1			2	12	33
		1421	138	40	1		3	1193	2796
6	1	83	12	9				100	204
	2	167	21	7				200	395
		250	33	16				300	599
7	1	301	52	8				178	539
	2	663	96	37	1			578	1375
	3	312	41	17				342	712
	3B	347	56	13			2	450	868
		1623	245	75	1		2	1548	3494

TABLE 44 (cont.)

<u>Test Pit</u>	<u>Layer</u>	<u>Br.</u>	<u>Or.</u>	<u>Cu.</u>	<u>Bl.</u>	<u>Col.</u>	<u>EIP</u>	<u>U/C</u>	<u>Total per Layer</u>
<u>Site PV48-137 (cont.)</u>									
8	2	1	5		5				11
	3	4						8	12
	4	119	12	4	2			64	201
	5	15	14					66	95
	6	10	4	1				20	35
		149	35	5	7			158	354
9	2	12	2	1				11	26
	2A	4						2	6
	3	125	23	5				106	259
	4	103	17	1		1		61	183
		244	42	7		1		180	474
10	2	430	21	6	2			228	687
	3	420	31	9	2	2		454	918
	4	277	37	16	3			347	680
	5	290	39	13	2	1		497	842
	6	486	56	13	3			528	1086
	7	379	38	3	1			329	750
		2282	222	60	13	3		2383	4963
11	Surface	85	8	3	1	1		36	134
	1	784	88	13	4	3		534	1426
	2	479	90	7	1			724	1301
	3	382	84	12	10			666	1154
	4	689	111	22	4		1	934	1761
	5	173	44	7				544	768
	6A	108	34	11	2			96	251
	6B	31	8					52	91
		2731	467	75	22	4	1	3586	6886

TABLE 44 (cont.)

<u>Com-</u> <u>partment</u>	<u>Layer</u>	<u>Br.</u>	<u>Or.</u>	<u>Cu.</u>	<u>Bl.</u>	<u>Col.</u>	<u>EIP</u>	<u>U/C</u>	<u>Total</u> <u>per</u> <u>Layer</u>
<u>Site PV48-137 (cont.)</u>									
3	1	39	11	7	1			325	383
	2								
	3	32	10	5			1	74	122
		<u>71</u>	<u>21</u>	<u>12</u>	<u>1</u>		<u>1</u>	<u>399</u>	<u>505</u>
4	1	104	18	10				98	230
	2	161	10	12			1	191	375
		<u>265</u>	<u>28</u>	<u>22</u>			<u>1</u>	<u>289</u>	<u>605</u>
5	1	49	6	3			1	55	114
	2	110	11	5			1	56	183
		<u>159</u>	<u>17</u>	<u>8</u>			<u>2</u>	<u>111</u>	<u>297</u>
6	All Layers	<u>66</u>	<u>15</u>	<u>14</u>			<u>1</u>	<u>107</u>	<u>203</u>

Key:

Br - Brown Ware (this includes Dark Brown Ware)
 Or - Orange Ware
 Cu - Cuzco Style
 Bl - Black Ware
 Col - Colonial Ware
 U/C - Unclassified and/or charred body sherds.

Notes:

This table summarises information on Charts II and III.

General Conclusions on the Excavations at Panquilma and Avillay

As stated previously, the excavations at both sites were made with a twofold purpose. The first was to ascertain whether there was a well-defined ceramic sequence indicated in stratified layers of refuse. The second was to determine the function of different structures. As it turned out, the excavations were only partially successful owing to their inadequate coverage of such large sites and because of events that took place in the early Colonial period, which have destroyed the evidence of associations.

With regard to ceramics, excavations have born out certain surface indications, rather than provided incontrovertible evidence for a sequence. In the first place, they confirm that there was an EIP occupation of both sites, something known from surface sherds in other sectors. EIP rims (fig. XCVII) were found in a lower layer at Panquilma and in test pits 5, 7 and 11 and compartments 3 - 6 at Avillay. Their number is too small to correlate with any architectural feature found in these lower layers, such as the pit in compartment 5 at Avillay and the wall at Panquilma. The only possible association is with the hearth and charcoal at the bottom of test pit 5, since this layer runs well below the base of the courtyard wall.

Secondly, the excavations at Avillay show the extent of the Colonial occupation there. Excavations in the patio group at the front of the site, test pits 4 - 7 and compartments 3 - 6, yielded no Colonial sherds or other artefacts, except for the iron nail from compartment 4, which could well be of later date. On the other hand, at the back of the site, test pits 9, 10 and 11 yielded sherds, and/or glass beads, scraps of post-conquest fabric and iron, all of which are also found on the surface in this sector. This suggests that activities on the part of the site's inhabitants came to a standstill

around the patio group after the conquest, whereas the occupation at the back of the site continued. There is no evidence for a Colonial occupation at Panquilma.

Thirdly, the difference in number and kind of materials yielded by each excavation places them into two groups: those with reliable ceramic associations and those with mixed ceramic associations. The first group includes pits 1 - 3 and 8 - 9 at Avillay. In the last two, beneath a huayco deposit, there is a packed mud floor which can be dated as no earlier than terminal LH, or possibly very early Colonial, because of its association with known LH architectural features. The presence of Cuzco-style sherds in the fill under the floor suggests that this, too, is LH. If it were earlier, there would be no Cuzco style sherds. If it were mixed, there would be a greater variety of forms. Since the fill is sealed in by the floor, it is inferred that the ceramic associations in both cases are genuine. These are the association of Brown Ware form I, Orange Ware form VIIA and Black Ware with the Cuzco style. Similar associations are also found in pit 2, although this has fewer sherds and, of course, in Strong and Corbett's excavations at Pachacamac. It is therefore inferred that these assemblages, together with those of pits 1 and 3, do represent what was in use during the LH and date the structures or terraces in question.¹ On the other hand, assemblages are mixed from the remaining pits at Avillay, nos. 5 - 7 and 10 - 11, those from compartments 3 - 6, and from Panquilma, for they contain sherds which can be dated as LIP from surface indications. The forms include the ones mentioned above, with additional Black Ware and Orange Ware forms, Brown Ware form III, Dark Brown Ware forms I-III, and the few EIP rims. Reasons have already been given for judging the refuse excavated to be the result of extensive looting and burning by Spanish soldiers and priests, intent on stamping out idolatry.² Such looting and

destruction would have mixed contents of graves from both the LIP and the LH. It is, of course, likely that some LIP forms were still being manufactured during the early part of the LH, and that there is genuine refuse³ mixed with the looted material, but it is impossible to sort one from the other. When LIP and LH forms are found together in the same layer of an excavation, the refuse cannot be used for dating purposes, and the associated structures probably belong to both time periods.

With regard to the architecture, the following three points can be made about its construction:-

In the first place, excavations such as pits 5, 8 and 9 at Avillay show that there were no foundation trenches for the walls, which were built on the surface, utilising large boulders if these happened to be there. This can also be seen with the wall in the lower layers at Panquilma.

Secondly, only certain structures have floors of packed mud. These are found in small compartments (nos. 3 - 6 at Avillay); larger roofed rooms (pit 8 at Avillay); and courtyards (pits 4, 6 and 9 at Avillay). Platforms or terraces (pits 1 - 3 at Avillay) and walls found in lower layers of excavations (Panquilma and pit 9 at Avillay) lack associated mud floors. When such floors are laid, they are usually 6 to 12 cms above the base of the lowest course of the wall. From the limited excavation, it would seem that they are associated with the larger, better-constructed patio groups, than with the intermediate-size room clusters and small terraces, but one cannot be sure of this point without further excavations in the latter areas.

Thirdly, excavations revealed no evidence of roofing material for the larger rooms and courtyards, but they did show that some compartments were roofed with canes. The caña brava and carrizo

found in compartments 3 - 6 at Avillay and pit 1 at Panquilma suggest that roofs were made from these canes, bound with tatora rope and covered with a layer of mud. This is particularly certain at Panquilma, where chunks of mud, several centimetres in length and width, were found with cane impressions and fragments of rope adhering to them. Such chunks were not noted in the Avillay compartments, although others at both sites are roofed with stone slabs or thick branches. Neither of these materials was found in the compartment excavations, although both wood and cane roofs could well have been burnt.⁴

With regard to the function of structures, the material excavated only partially confirms, and sometimes fails to confirm, the original working hypotheses. These were that the terraces were dwelling platforms, the courtyards were areas for public ceremony, the larger rooms were used for various, as yet unspecified, domestic and/or administrative purposes, and the compartments for storage. They were tested by relating the quantitative and qualitative yields of the excavations (tables 40 - 44) to their location.

The implications of the previous interpretation of the individual pits were that abundant refuse usually signifies post-conquest looting of tombs and that scant refuse indicates the pre-Columbian context. Certainly pits outside structures (nos. 7, 10, 11 at Avillay and no. 1 at Panquilma) were all within 20 m of a tomb. They all had the highest yield of sherds, fauna, vegetal material and small finds. Fabián de Ayala's letter quoted in note 4 makes it clear that tombs were dismantled immediately and mummies were generally taken to a field to be burnt, so that one would expect debris from these activities to be found outside the structures and close to tombs.

If we return to the working hypotheses, we find that compartments have medium yields of sherds in hundreds and less small finds etc. If they were purely storage areas, as is often suggested (Trimborn 1972, p.314), one would expect to find in them remains of what was stored. This could be food, either loose or kept in ceramic containers (Morris 1971, pp.138-139); cloth, which is known to have been important in the Andes (Murra 1975, pp.146-170); or other goods needed by the community or state, such as weapons, as is known from Jauja (Morris 1967). It could be argued that the quantities of foodstuffs found do prove storage, but when one considers that these include both plants capable of being stored, such as maize and peanuts, and those that are perishable, such as pacae, guanábana and avocado, and that these are combined with objects less likely to be stored, such as spindle whorls, awls, and needles, then the storage function remains hypothetical. It is unlikely that all these items would be stored in the same compartment. The finding of human bones in compartment 6 (and in others in the surface survey) makes it fairly certain that their principal purpose was to house the dead or maybe a sacred object. They may, of course, have had a storage function before being used as tombs, but the excavations could not show this.

Pit 8 was the sole excavation into a room. It appears to yield a fair amount of refuse, but it must be remembered that the bulk comes from fill between the two floors, and that the occupational debris connected with the upper floor and the extant room is very small. Ideally, one would hope to find some artefact that would indicate function: a quipu if the room were used for administration, loom weights and thread, if it were used to manufacture textiles, but there were no finds other than a few sherds. The only clue to function is given by the burial, which, though connected with the pre-existing structure, indicates that the area may have been

sacred and used for ceremonial purposes.

If courtyards were areas for public ceremonies, one would expect to find debris from eating, drinking and perhaps food preparation, activities known to have taken place during ceremonies (Avila 1966, p.258). The excavations into three courtyards yielded different amounts of refuse. It could be argued that the yields of pit 5 do indicate such activities. Although I prefer the explanation that the material is the result of post-conquest looting, some of it could well have been occupation debris, as stated previously. The pre-Columbian activities that do give clues to the courtyard's function are the building of four compartments on a previously laid floor in the west corner. Bones were found in caches in these compartments. This would imply that the courtyard was a space reserved for rites for the dead, and in this sense had a ceremonial function, although it is debatable how public these ceremonies were. Thus the original hypothesis is only partially confirmed.

Pits 9 and 4 were the other excavations in courtyards. They can be grouped together as yielding very little refuse, for in the former the bulk of the refuse again comes from fill beneath the floor. In both pits there is a handful of sherds connected with the upper floor. Some of these were charred, which might indicate that food was served in the area. At the same time, the post-conquest burials beneath the floor in pit 9, and the proximity of tombs to pit 4, suggest that we are dealing with the same kind of area as the previous courtyard, one reserved for ceremonies connected with the dead (see Avila, *op. cit.*, p.257).

There remain the excavations into terraces. Pits 1 to 3 all yielded very little refuse which was always found in the same place: behind the front retaining wall of the platform. There was one complete artefact from these pits, a bone awl, which may have been

dropped in situ or lost. If these were house platforms, one would expect to find debris from domestic activities, such as food preparation, spinning, weaving, tool manufacture. Because of the charcoal patches, plant remains and small size charred sherds, the hypothesis is partially confirmed. However, against this interpretation is the fact that no definite hearth⁵ has yet been found on one of these terraces. The closest arrangement to a hearth is the blackened earth and slightly charred stones in the lowest layer of test pit 5, (q.v.), which was probably not connected with LH activities. It may be that the limited excavation in the platforms has simply missed the feature. It is also possible that the branches and twigs were used without accompanying stones and these would result in the charcoal patches. The grinding stone found on a lower terrace provides some support for their being house platforms, which may well have been grouped together as part of a dwelling complex, rather than each one's having an identical set of activities carried out on it.

In conclusion, even though refuse is copious, with a variety of fauna, flora and artefacts, it may not help to identify the function of structures, but it will provide other information of a technological, stylistic and dietary nature. At the same time, when it is genuine occupation debris, it may not be as informative as one would wish. Certainly a few test pits, considered in isolation from other evidence, will never be sufficient to identify the function of structures with confidence. They can only give results when combined with a thorough surface survey of the different kinds of structures on which information is sought, and the use of as much historical and ethnographic data as is available.

On the positive side, the excavations confirm the importance of ancestor worship in the Lurín and hint at child sacrifice, which is known from other areas in Peru. They also show the external ties of the study area. The abundant shell remains indicate relationships with the coastal fisherman or fishing rights on the coast. In particular, the spondylus shows ties with those who traded with Ecuador. The llama bones and wool imply exchange with the highlands or pasture rights there. The potato and oca are also highland plants that are unlikely to have been cultivated in the study area. Finally, the blue glass beads of the Colonial Period suggest that certain individuals in the community had the wealth or power to obtain such items.

NOTES

1. The plainware contents of pits 1 and 3 are nondescript, there being no Brown Ware rim sherds. In pit 1, however, there is the lower part of what could be a Brown Ware form V rim, and pit 3 has part of a miniature Black Ware bowl with an incised rim. There is nothing in either assemblage to suggest mixture, or sherds from an earlier period.
2. For a description of the activities of the priests, which would produce the "refuse" found in and around courtyards, see Duviols 1972, pp.207-209.
3. Genuine refuse refers to what was discarded, intentionally or otherwise, by the inhabitants of a site for a variety of reasons: e.g. a worn-out object; a by-product of manufacturing or culinary activities; a lost object, etc.
4. See Ávila (1966, p.251) where, in a letter about how priests destroyed the idols and mummies of Huarochirí, Fabián de Ayala states that the Indians were forced to dismantle the houses of their dead and use the wood and straw (sic.) from them to burn the bodies.
5. By hearth is meant a small arrangement of stones, with carbon still adhering to them and ashes and burnt earth around. Such an arrangement for cooking can be seen outside many peasant huts in the valley. It is reasonable to expect something similar for pre-conquest times.